

MINICAM



For Every CAMERA User

The Miniature Camera Monthly

DEC. 25¢





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AGFA

35 MM. SUPERPAN SUPREME

● From a color snapshot by H. Armstrong Roberts. See "Babes in the Studio," page 59.

C O N T E N T S

Vol. 2

DECEMBER, 1938

No. 4

MINICAM MONTHLY

WILL LANE, *Editor*

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COLOR PLATE.....	<i>Kodachrome</i>	By H. ARMSTRONG ROBERTS

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"In Focus"

"Is Lens Too Fast?"

Sirs:

I am not a subscriber, but I buy MINICAM on the news stand every month, and read it from cover to cover. It was fun making photo Xmas cards as explained in November. However, you should have shown us MINICAM's own Christmas card. I'll bet it will be a dabr.

Would you mind helping an inexperienced amateur who has a Contax III and a bit of extra equipment—plenty of ambition, but little experience—by answering a few questions?

Is it true that the Contax 1.5 lens is too fast to use on an enlarger for projection printing.

I want to buy an enlarger for present 35

mm. films, but would like to buy one which will also take larger films, probably 2 1/4" x 2 1/4", and if possible 2 1/4" x 3 3/4" films. Is this possible and practical?

In taking pictures of objects of more than 500 feet away, should my camera be set at infinity? If so, will objects in the foreground be in focus?

I would appreciate it if you will answer these questions at your earliest convenience, as I want to buy some equipment, but would like to be sure of these things before I buy.

J. LYNN MILLER.

Richmond, Va.

● Yes, your f1.5 lens may be used to give excellent results in enlarging. Use it wide open for focusing and



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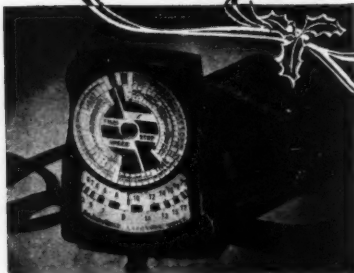
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then move the diaphragm to stop down before exposing the print. The amount to stop down will depend on the intensity of the illumination and the density of the negative. Stop down until correct exposure is about 10 to 20 seconds. Excellent enlargers are available to handle negatives from the 35 mm. size to $2\frac{1}{4}$ " x $2\frac{1}{4}$ ". The next popular enlarger size is designed for negatives up to $3\frac{1}{4}$ " x $4\frac{1}{4}$ " or 4" x 5". For your purposes, the most satisfactory choice would be the enlarger which handles negatives $2\frac{1}{4}$ " x $2\frac{1}{4}$ " and smaller. The answer to your final question depends on the lens opening used and the distance from camera to nearest object. The greater this distance and the smaller the lens opening, the greater will be the depth of field bringing near and distant objects into focus. A complete article on depth of field will appear in a future issue.—Ed.

Manufacturers Ahoy!

Sirs:

I have for some time been reading all the photographic magazines available in my town, and I find it very hard to wait from one month to the next for MINICAM. I for one would rather have two issues of MINICAM in one month than I would have one MINICAM and another photographic magazine.

I have noticed the automatic fixed focus enlargers for users of 35 mm. film, but what about the users of $2\frac{1}{4}$ " by $2\frac{1}{4}$ " film such as I am? I have a Rolleiflex and truly hope that some one will make an automatic fixed focus enlarger that will take $2\frac{1}{4}$ " by $2\frac{1}{4}$ " and make an enlargement near $6\frac{1}{2}$ " by $6\frac{1}{2}$ ".

Yours for two issues of MINICAM a month.

SYLVIA CROFT.

Waynesboro, Pa.

"Accidental" Action Shot

Sirs:

A photo which I snapped accidentally has been twice reproduced in newspapers without my having even submitted it. Which goes to prove that amateurs seldom recognize the makings of a good picture. In both cases the editors (being familiar with the circumstances) remarked that it was certainly a good action shot.



● Leica G, Summar f2 lens, 1/100th second at f4.5 early in the morning on shady side of street. Agfa Ultraspred film developed in Champlin 15.

The man in the foreground is engaged in selling a half million dollar building to the three other men and it is evident that he is holding their attention. In fact, he held it so well that they bought the building. The man on the extreme left, Cooper Jackson, has in the

past been associated with several papers both in the U. S. A. and Mexico.

I get a great deal of inspiration from reading your magazine and am always interested in some other amateur's experiences.

O. G. JENKINS.

Newton, Kan.

"Like An Angry Snake"

Sirs:

I have a howl to make and a question to ask. Not howling about MINICAM, of course. It is tops and has been a lot of help as well as given a lot of pleasure. Perhaps you might even be able to solve my pet peeve. I have grave doubts that you can be of any help. But getting this off my chest may relieve the internal pressure a bit.

Briefly: How, oh how the Billy Blue Blazes, does one load a roll of film into the spiral type reel of one of the modern developing tanks?

When my tank arrived, I hurried into the darkroom with a freshly exposed roll of Verichrome to try it out. What happens?

I follow directions faithfully. I unroll the paper, clip the corners of the film and insert it into the opening of the groove. So far so good. I push gently until a few inches of the film is on the reel, about half way around the first time. Then it balks like a stubborn mule and refuses to go an inch farther. I push harder. The film buckles and slips out of the groove. With a snap it leaps up and coils around my arm like an angry snake. Patiently, I disengage the film, wind it back on the spool and try again.

This time I do not get quite as far as the first attempt when it again sticks. I push gently. It does not move. I push harder. Results ditto. I give a quick shove. There is a sudden ripping sound and my film is torn in half. I give up the battle and salvage what I can by developing the torn film in an open tray.

Being a stubborn cuss and unwilling to give up a new gadget, I tried again. Perhaps some special brand of film was required. I tried Verichrome, Plenachrome, Superchrome and Panatomic with remarkably uniform results. Invariably, after wearing out my patience, losing my temper and completely exhausting my vocabulary, I emerged from the struggle with wrinkled, scratched and torn films and a soured disposition.

I have owned that tank two years and to date have developed exactly no rolls of film in it. Never have I succeeded in pushing more than half the length of a roll of film into the reel. I paid five and 95/100 hard-earned dollars for the cussed thing, and there it idly stands on my darkroom shelf leering at me in

Christmas COLOR PICTURES



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You will want it in color—your picture record of Christmas—your family opening gifts, your home with its wreaths, mistletoe and lighted tree! And you'll want your pictures shown on the screen that does full justice to your picture-taking skill! The Da-Lite Glass-Beaded Screen shows all of the beautiful gradations of colors with "camera-eye" fidelity. It makes any pictures—color or black and white—brighter, clearer and more realistic.

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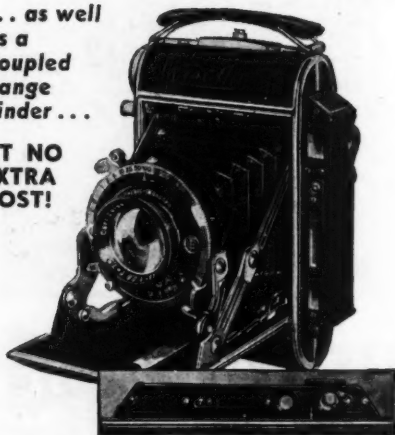
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the darkness while I patiently see-saw my prized rolls back and forth in the open tray.

I still think that the spiral reel developing tank is a good idea. But, like many other good ideas, it just simply hasn't worked out for me. If there are some involved problems of advanced calculus to be solved, or perhaps some magic words that must be spoken, before one can become a member of the honorable fraternity of successful operators of miniature tanks, I think that I am entitled to know what they are. But in the meanwhile, if some optimistic soul should offer to swap a couple rolls of Panatomic for said tank he will make a deal.

W. C. MINOR.

New York.

● Loading a tank, like taking good pictures, is easy when you know how. If tank is of the adjustable type, first make sure it is set for the desired size. The grooves must be perfectly dry. Practice loading in daylight with a developed roll. There should be just enough play to allow film to slide smoothly without slipping out of the grooves. Before loading, cut a straight, smooth edge across the film with a scissors or print trimmer. Then fold or double back about an eighth of an inch of the film. This will help it slide easily, and you soon will wonder how you ever got along without a tank.

Camera in the Classroom

Sirs:

Here are some prints taken at San Diego High School, while I was an Art teacher there. All strictly unposed pictures, they were taken candid for the Annual. Incidentally, 22 pictures were used, with me retaining future publication rights. My equipment consists of a Model "D" Leica, f3.5, 50 mm. lens, a slow speed attachment, and a Weston exposure meter. All pictures are taken in natural light.

To me the most interesting phase of my



● "Study Hall," one of a series of classroom candid shots. Super X film, developed in D76, f4.5 at 1/20th second.

experiment was the necessary technique evolved in order to get satisfactory results. Getting the pictures without the students getting wise was the difficult task; secondly, to get a correct exposure; thirdly, depth of focus in the poor light.

In each case I contacted the teacher whose classroom I selected and secured her permission. Between classes, at the hour of the day I found the light most desirable, I checked with my Leicameter, to determine the slowest

shutter speed I could use with safety. Next I established my point of focus about one-quarter to one-third of the way back from the front of the room, and checking with the required lens stop, gauged from the depth of focus ring on the camera, my depth of focus field. I next set the camera, and left the room.

Returning to the class as soon as it had started, at the front of the room, I engaged the teacher in conversation, she having her back to the room, while I faced it. Waiting for a moment when no one paid particular attention, I slipped the camera from my vest pocket, where it was all set, took a quick look through the finder, and shot over the shoulder of the teacher.

On other occasions, I had to work from an elevation because of obstacles in the foreground, and pursued a different technique. In these instances I ambled into a room, announced to the class I was making a vision check, climbed up on a chair or table, and took my time using the meter, and setting my camera, making frequent aimless notes in a small notebook, then when ready, taking the picture. Only one student got wise; he was a camera fan, too, but was too good a sport to say anything.

BOB TURNBULL.

San Diego, Calif.

Builds It

Sirs:

I buy every magazine I can, that is devoted to photography, and the first thing I look for is any articles on "Build It Yourself."

In the October issue of MINICAM, H. E. Foster claims that factory-made articles can be bought for half the price; all I have to say is, that he is all wet; I never buy anything that I can make myself.

I have an 8 x 10 automatic printer I made about 15 years ago that cost me \$5.00 to make, and I have been offered \$25.00 for it several times. I also have a complete copying outfit. I made every part of it but the lens and shutter.

I have 5 x 7 and miniature auto-focus enlargers I made, and both cost me far less than I would have had to pay for a factory-made enlarger. Of course, I have a complete shop in my basement, but I made most all of that equipment, too.

STEPHEN ALLEN.

Gary, Ind.

"Swell Color Photograph"

Sirs:

I take exception to the unfair statement of Thomas D. Sharples about the November cover by Avery Slack. I think it a swell photograph full of action and life. In fact, it is representative of the best in color photography. Go in for oil paintings as Mr. Sharples suggests, and you will probably satisfy only a half dozen people who have been able to see beyond the



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end of a paint brush, but at the same time you will probably displease at least ten thousand subscribers who like the beauty of life, truth and action. I for one take my hat off to Mr. Slack for his fine color photograph, and to you for using it.

LEE FORREST.

New York City.

Stork-Camera Conspiracy

Sirs:

On reading through October MINICAM, I came upon the comic cartoon, "He wants a pic of the stork who's coming today," and decided that since the stork and I run a little business together, some of your readers might like to know about it.

I am a registered nurse and work in the maternity department of a small hospital. During my time off duty I take photos of the newborn babies, prints of which are sold to the parents. Enclosed is a picture of a young lady three days old. My youngest model so far was a little man just twenty-five minutes of age, all the others



• "Three Days Old," Exposure f4, 1/50th second, Super XX film developed in Panthermic 777. Taken by light of one nursery window.

ranging from one to twelve days old.

My camera is a Kodak Bantam Special, and by using either Super X or the new Super XX film, the light from one nursery window is sufficient.

I look forward to MINICAM each month and have received many helpful hints, for which I am most grateful.

(MRS.) ELIZABETH TUSING.

Riverside, N. J.

One-Year-Old Meets 50

Sirs:

I have learned that "Life begins at forty" is not quite correct because I am a bit past fifty, and while I have enjoyed more than my share of the joy of living, twenty-five years with a delightful lady and the growth of two boys to manhood, it took the birth of a little magazine called MINICAM to initiate me into a new scheme of life.

Now, the boys and their girl friends can have all the "Jazz" on the radio they wish for; I don't even hear it; I am downstairs listening

to the faint hissing of a fresh print just slid into the acetic acid short stop bath.

The real reason for this letter is that I wish to thank you for the index, it prompts me to read the whole year's literature over again.

I am actually so pleased with it that I went to the bother of making a picture of the books,



and after that was done I found that the colored covers which I first felt were too lurid for a really dignified magazine have taught me something, for they show me conclusively just what I can expect of Ortho film and room lighting.

This negative and resulting print is going to be of immeasurable use to me in my selection of contrasts and backgrounds for my amateur portraiture this winter.

I know that certain colors just won't take well.

The negative material: Defender H. G. S. 9 x 12 cm. Recomar camera, two mazda lamps of 100 w. and 150 w., about four feet from the piano on which the books were placed; exposure 1/5 sec. at f/8. I'm having fun.

W. L. MCINTYRE.

Stillwater, Minn.

The Christmas Picture's Brighter with a KALART Micromatic SPEED FLASH



A honey of a gift for the camera fan . . . and inexpensive, too. The Kalart Micromatic Speed Flash lets you capture all the spirit of the holiday party . . . intimate, gay, really CANDID, unposed pictures that live forever.

Kalart flash pictures require no special skill or extra effort. Dependable, accurate, the Kalart Micromatic can be shifted from camera to camera quickly and without fuss. Fits practically all cameras, \$13.50. At your dealer's.

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These features make the Omega the pride of

every man who owns one: easy-to-clean condensers and dust-free negative carriers; smooth riding counterbalanced head; speedy, accurate focusing lever; and efficient double-condenser illuminating system.

Model "B" Omega—for 2 1/4" x 2 1/4" and smaller film. \$65, without lens.

Model "D" Omega—for film up to 4" x 5". \$175, lens board and condensers.

▶ Simon Automatic Film Drier dries miniature film rapidly, safely and cleanly. Preserves delicate halftones, reduces drying time to 10-20 minutes. Write for descriptive folder G.

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Model "A" Omega . . . for 35 mm. strip film. \$48, without lens.

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a GIFT that means
Years of
Enjoyment!



If you want to give a camera that will bring lasting pleasure and satisfaction to someone else (or to yourself), get a Rollei. These streamlined precision cameras make it easy for anyone to get critically sharp, beautifully composed pictures. They make twelve pictures in the popular, practical $2\frac{1}{4} \times 2\frac{1}{4}$ " size on a roll of standard, inexpensive, easily obtained #120 film. They enlarge to any size—but even the economical contact prints are large enough to mount in an album and view without straining the eyes. A Rollei camera is not a novel "toy" or "fad" camera. It is a practical gift that will be used and appreciated for years to come.

Made in four models, as follows: Rolleicord Ia, with Zeiss Triotar f/4.5 lens, \$47.50; Rolleicord II, with Zeiss Triotar f/3.5 lens, \$65.00; 4 x 4 cm. Rolleiflex, with Zeiss Tessar f/2.8 lens, \$105.00; New Automatic (6 x 6 cm.) Rolleiflex, with Zeiss Tessar f/3.5 lens in Compur Rapid delayed-action shutter, now only \$130.00.

If your dealer cannot supply full information, write for illustrated booklet.

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Picture Xmas

WITH A MINICAM

By C. W. GIBBS, A. R. P. S.

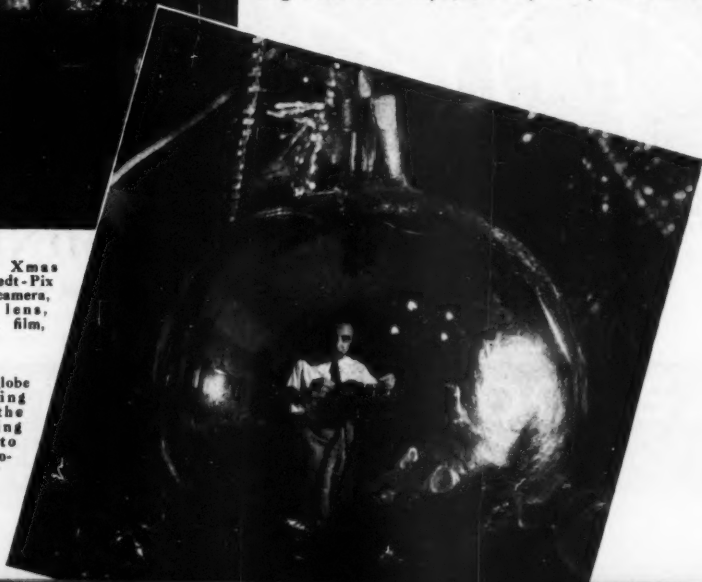
THE holiday season has a meaning for everyone, but above all, it means picture-taking opportunities. More than that, it creates "must" pictures—scenes, objects and faces we wouldn't miss for all the world. Recorded on imperishable film, the pictures will re-live the happy days many times over for ourselves and friends.

Just taking a few random snapshots will not turn the



● Wall Street's Xmas tree by Eisenstaedt-Pix (above). Leica camera, Leitz Elmar 3.5 lens, Eastman Super X film, 2 seconds at f4.5.

● Closeup of a globe on a tree showing a reflection of the photographer taking the picture. Photo Teale from European.



trick. More is required. This does not necessarily mean costly equipment. On the contrary, even the simplest camera may be used. Nor are a raft of accessories required. With a tripod and a tilting top—if you do not have one, give yourself a pre-Xmas gift—you will be all set to give your holiday professional-style camera coverage.

Like a press lensman on a new assignment, do two things: (1) write a brief scenario or shooting script listing the subjects to take, and (2) make a few test shots a week in advance.

What to shoot? Why, the people, things, situations and expressions that make every holiday eventful and unique.

These events start days before any festivities. If there are children, there will be a shot of them gazing in a toy filled window. Then perhaps a shot showing a pile of packages just delivered from the store with the children standing around with wondering expressions. Follow with shots of mother and father addressing packages in bright Christmas wrappings. Then a shot of father trimming the tree and a picture of the children asleep.

On Christmas morning, be sure you are set up to make a shot as soon as the children see the presents and the tree. Catch that expression for a picture you will prize. Then make a picture of them by the tree with their presents. Start early to make shots of the children playing with their toys; the toys may not last long.



THE FIRST SNOW

By ANDOR ANGYALFI

For the family group at dinner, set the camera up rather high and make sure everyone is in the picture. Use a self-timer and you can be in it too.

In the evening, photograph a child asleep in mother's arms. The closing shot in the sequence might well be the children fast asleep clutching their new toys. This little sequence will not fit all cases but its general idea can be adapted to various conditions.

Some minicam owners, of course, will want impersonal shots such as bums asleep in doorways, brightly lit shopping

centers, closeups of church bells ringing, but no matter in what direction your tastes lie—shoot a sequence and each picture will add to the interest of the other.

The most important thing of all in interior work is the question of the light source. There are three possible illuminants. These are the natural room lighting, the flood bulb and the flash bulb.

Natural room lighting can be used for snapshot work only in conjunction with fast lenses. This means using one of the high speed films such as Agfa Ultraspeed or Superpan Press at 1/50th of a second



(RIGHT)

- Taken at night, immediately after a damp snow, this time exposure has met with excellent success in the pictorial salons. The camera was placed on a tripod and in the house all lights were turned out that would show from the front. Makina camera, $2\frac{1}{4} \times 3\frac{1}{4}$, Anticomar f2.9, 10 cm. lens, Agia Super-Plenachrome film. Exposure 90 seconds at f6.

(LEFT)

- Above all, be sure you are set up to catch the Christmas morning expressions when children first see their presents. Use either flood or flash bulbs. (Previous page.) Photo Gnliks-European.

(BELOW)

- Indoors and out, make a record of the costumes, decorations, gifts and faces of the holiday festivities. "The Little Santa" (below) by Doris Day.



at f3.5 under bright room lights. In some cases f2 is required.

Unless one has a fast lens a time exposure must be given. Use the fastest possible film so that the exposures will be short.

Ordinary room lighting varies so much that it is im-

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● Old architecture furnishes new photographic subjects. Graflex, $3\frac{1}{4} \times 4\frac{1}{4}$, f4.5. 1/50th second.

Gargoyles Alive!

By LES ORDEMAN
As told to Bob Hammond

A piece of stone that hadn't stirred for a thousand years---it made the editor say, "By the Magic Box---It's Alive"

"GO out," the Sunday editor said, "and get me a rotogravure layout. Use your own discretion, but for God's sake don't shoot Mount Hood. Our readers know every wrinkle on it. Get me something new! Something different!"

An assignment like that is music to the ears of every newspaper photographer whose day is filled with routine shots of mayors kissing babies, big-wigs pointing with pride and local charities flaunting their latest beneficiaries. But it had its drawbacks. Getting something new and different in this age when 10,000,000 Americans are packing cameras and virtually deluging city desks with their virgin efforts is no mean trick. Comparatively, finding a needle in a haystack is child's play. But the life of a free agent, even for

a day, was bounty enough. So I shouldered my loaded Graflex, telephoto lens and Zeiss Ikomat. Then off to the sleuthing.

My first hunch was to gather a few human interest shots with sociological import for, though the idea is far from original, the faces at least are new. But not this day. There simply were no new faces of sociological import to be found. I wandered the plaza and the park blocks, meandered past beer halls usually redolent with beer and bums, and explored Grandma's Kitchen; but no luck. The forgotten man had moved down the scale—he had disappeared.

Well, I thought, there is always the waterfront, and so, of course, there was. The good old waterfront, our time-honored mainstay, would have to come through again. As I headed for the river, I wondered what inland lensmen do in like crises. No ships, no sailors, no seagulls! I shuddered at their lot.

This day, their fate was no worse than

←(left)

ROMANCE

By ANDRE DIENES

● Inanimate clay brought to life by photographer's magic! Smile, expression, modelling—it is all there and as human as any live model. Note how the soft light from the side outlines the features and breast, while, in the background, the reflection of the temple pillars give the stately and convincing touch to the entire composition.

mine. There were, to be sure, a few ships at anchor, but they were particularly at peace with the world. The wharves had not their customary bustle, only a placidity that would have done well for a pastoral. Ships, of themselves, are no novelty either, and to save my soul (or my professional standing), I could not frame in my viewfinder a new angle or facet for the ship picture.

There were a few seagulls soaring around and one soared too close in his elegant ease to my camera, so I let him have a full $1/475$ th second $f8$ load and smiled grimly as I felt him bite the emulsion. Still, a seagull is not a roto section, as I was beginning to realize only too well.

Retiring from the docks, I headed up Southwest Front Street, which is far enough back from the river to keep it out of sight but not far enough to be free of the clatter and odors which haunt its fringe. Once the thriving, rich heart of the city, it had been passed by the modern

age as bickering factions battled over whether or not the street should become a crosstown artery, which would mean widening the street and thereby had stopped any new construction. Leaning a weary elbow against the grayed walls of an 1880 merchant's mansion, I turned to my pipe for solace and inspiration.

The anti-tobacco leagues will find no friend in me, for more than once has my pipe been the balm for bouncing nerves and the flaming fount of my ideas. This time, though, it seemed the old hod was going to fail me. Suck as I would at the tooth-worn stem, I could not pull in a single ray of originality. Ascending smoke hung in heavy clouds and unveiled not a single picture. In dejection I knocked the ashes from the bowl when, lo and behold, the old pipe turned the trick after all.

All unseeing, until I wrapped the briar, I had been leaning on a gargoyle of classic mold. As the sparks sprayed toward the sidewalk, one errant coal burned an idea

- Superhuman struggles staged for the photographer's delight, and no necessity for waiting for the peak of the action. Select a part rather than an entire structure. Making stone spring to life involves two chief problems, waiting for effective lighting and the selecting of a "frame" or suitable slice of action. Exposure $1/20$ th second, $f4.5$.





CENTAUR CARRYING OFF NYMPH

By ANDRE DIENES

● Action, too, is provided by these subjects which have been waiting motionless for years, and do not bat an eyelash before the longest time exposures. Note the camera angle and cropping—the careful treatment of the lower right-hand corner, and the nymph's arm flung into the yellow-filtered sky.

into my brain. Why not take a picture of the gargoyle and other architectural relics of a previous age? I inspected the mythological figure. No question about it, the gargoyle was definitely photogenic. A brief inspection proved that the bric-a-brac and gingerbread which adorned the old building was ripe with romance. It told a tale which the cameras in the local prints had not yet presented to the public

eye.

Feeling the enthusiasm of old kicking up a fuss in my blood stream, I sighted the Ikomat and the gargoyle departed his cloistered niche in the shadows of the past and took his place on the amber page of modern rotogravure photography. Then, with the Ikomat around my neck and with the Graflex in my hand, I went on a pic-

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"THERE ARE MANY MANSIONS"



"Thought" PHOTOGRAPHY

Landscapes, portraits, table tops, design pictures—when these become routine, turn to the photography of abstractions. Make pictures of your ideas.

By F. G. HALVERSEN

Illustrated by the Author

BEAUTY, love, religion, desire, hate, ambition, lust—these things are put into form by art, and its spokesmen are poets and painters, novelists and musicians.

The photographer, too, has emotions to express and a medium to do it. Making a picture is his way of shouting from the housetops.

An abstraction, pictorially speaking, may be interpreted as an expression of a feeling or emotion. To try to convey this feeling by means of photography is a challenge to any person's ingenuity. Of course, a person can tinker with a few scraps of material and get an arrangement comparable to a Kandinski picture, but to start out with an idea first and try to express it with the camera is an entirely different matter.

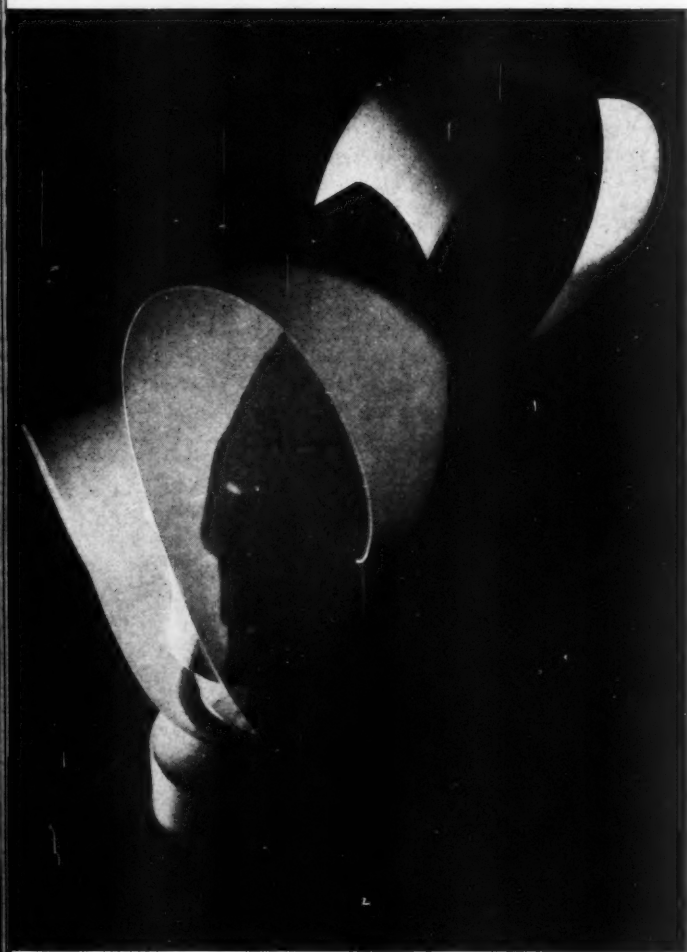
For example, in the picture titled "Women," the work was first started on a scratch pad with a curving line, Hogarth's "S" line of beauty. From this, finally evolved decorations suggestive of those worn only by women, the most distinctive being orchids. Then came the problem of simplifying an orchid design. This was accomplished by cutting three

simple leaf-like pieces out of fairly stiff paper, slitting the bottom edge part way to permit folding for a base, as shown in Fig. 3. Then the three leaves were fastened with a single thumb tack to a round wooden block, so turned on a lathe as to be suggestive of a hat, Fig. 4. A curl was deemed essential, but a happy circumstance while fastening the curl in the center of the leaves showed the curl could be made to cast the shadow of a man's profile. With the set-up being all in white, only one spot light was used so as to emphasize the man's shadow. The object was placed on a piece of black velvet for the touch of texture so essential to women.

An expression of emotion becomes a much more difficult problem. The possibility of photographing the laws of metaphysics as being the most abstract of all emotions was considered. The law of reward, universal in all religions, was the first one to be tried. This proved to be an exceedingly knotty problem until that mysterious portion of the brain, "the subconscious," came to the rescue. Then the solution proved to be very simple. A sleeve and scroll of tin were ordered from the tinsmith. Placing these on some white corrugated cardboard as shown in Fig. 1, a strange avenue of odd-looking houses began to appear, as the reflections of the corrugated board bounced back and forth. It took sometime to maneuver the tin and camera so that the street level appeared higher than the observer's eye, but it was finally accomplished. The result was deemed a suitable answer for the Christian religion, "In my Father's house,



● How "There are Many Mansions" was made by photographing the reflections of a piece of ordinary corrugated paper in a piece of shiny tin. Fig. 1



WOMEN

● An impressionistic picture of orchids and the man who buys them. Rolleiflex camera, f8, 1/25th second.

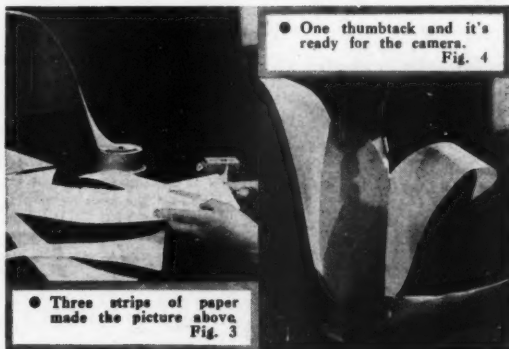
FIG. 2

there are many mansions," while the Buddhist could arrive on the "Road to Nirvana," or the sciences could conclude with "There are many consciousnesses." It is titled, "There are Many Mansions." See page 22.

Music, at least to the writer, has always drawn pictures, probably not in the usually accepted artist's sense, but with misty swaying figures as in the

"Bacchanal" of Samson and Delilah, or with a bold up-building of trembling rays and splashes of light and dark as in Rimski-Korsokov's "Hymn to the Sun." These were comparatively easy to illustrate. The former was done with bits of tin foil stuck on a white board and reflected in a flat piece of tin to destroy the texture of the foil. The latter was done with white corrugated cardboard folded and pinned into the desired forms, with a single spot shooting up through it toward the camera.

This served to convey the impression of height and grandeur and the feeling of an insignificant human looking upward before gigantic ascending rhythms that gradually increase in volume and size until finally bursting all the bounds of heaven, earth and infinity.



● One thumbtack and it's ready for the camera.
Fig. 4

● Three strips of paper made the picture above.
Fig. 3

POLE-CAMERA

Designed to meet the needs of street-level and architectural work, it lends itself also to photographic stunts, freak angles and self portraiture.

By E. EVANS

Illustrated by the Author

AT EVERY parade photographers are seen watching from afar and waxing furious as they miss good shots because of impenetrable crowds. Their only recourse is to climb a wall or telephone pole. Carrying a step ladder is hardly practical nor is there always a building handy which can be ascended for shooting from the second or third floor.

The Pole-Camera, contrived by a news photographer, not only overcomes such obstacles, but also is an invaluable accessory for obtaining effective camera angles. A photograph made from street level usually appears trite and ordinary. But raise the camera 10 or 15 feet from the ground, and the result may be highly effective.

The pole shown here is made from four 4-foot sections of round hardwood. At one end is fastened an iron bracket or a tilting tripod top. The shutter is released with a piece of string.

The lens is set to the desired focus before the camera is elevated. For the field of view, the



● A rigid wood pole, an iron bracket or tilting top, and a piece of strong cord to trip the shutter are the only materials required. Screw eyes may be used to hold the string in place along the pole.



● The pole camera in operation (left) and the photograph it took (below). Shooting at eye-level gives undue prominence to streets and sidewalks. Elevating the camera produces a more effective angle for pictorial street scenes.



camera viewfinder is first consulted at eye level. From this, the lensman estimates the elevated field of view. Distances in feet are marked on the pole.

Sometimes the pole or the camera can be propped against a convenient lamp post or building. This holds the camera quite steady. Otherwise the possibility of camera motion is counteracted with a rapid shutter speed of 1/100th to 1/200th second.

The eye-level shot emphasizes foreground, street and sidewalk. The pole-level shot, being above the heads of passers-by, puts the sidewalk expanse into place as a background and emphasizes people and heads.



THROUGH THE ARCHES

Fig. 1

● The Woolworth building, one of the most photographed subjects in the world, presented anew in a fresh and interesting guise—the result of proper foreground treatment. Foreground archways are effective for “framing” pictures. Two or three archways are easier to compose than one. In a composition like the above, moving the camera only a few feet is enough to alter the entire composition. Zeiss Ihagee camera on a tripod, $\frac{1}{2}$ second at $f/11$, yellow filter. The time exposure was given in order to permit a small enough stop to bring the foreground into sharp focus. For other treatments of this same subject see Figs. 3 and 9.

Watch that FOREGROUND

*Utilize the pictorialist's technique for
(1) adding compositional elements, and
(2) "framing" a picture photographically*

By EDWARD ALENUS, F. R. P. S.
Photographs by the Author

THE importance of the background is frequently stressed, and rightly so. But what about the foreground? The first glimpse of an interesting scene is seldom from the perfect point of view, photographically speaking. Many a stirring scene, when reduced to picture proportions, becomes nothing more than a distant outline and broad expanse of meaningless foreground.

In Fig. 2, for example, an attempt to picture the distant, awe-inspiring New York skyline resulted in a composition in which everything was dwarfed in comparison with the bridge floor and girders—the least interesting parts of the picture.

Such distortion is the natural result of the perspective of the camera lens, to which the closest things are the largest.

Perhaps, then, foreground should be eliminated? When this is tried, perspective becomes equalized to such a degree that all feeling of distance is lost. The result is like Fig. 5, in which everything appears to be on one plane, like a theatre backdrop that everyone knows to be fake.

Is the foreground, then, something we can't get along with—and can't get along without? How can we tame it? One of the simplest methods is by "framing."

An English magazine recently reproduced a print which showed two different subjects, a statue and a palm tree. (See

● When there is too much foreground, the impressive New York skyline becomes insignificant. Exposure 1/50th second, f/11. Compare with Figures 5 and 6.

Fig. 2.



● The Woolworth building as a post-card picture-taker would present it. The relatively diminutive human figures give size and scale to the structure. But there is not enough to the composition to make it pictorially worthy. So the photographer looked around for a suitable foreground and achieved Fig. 1 on the previous page. The above and Fig. 1 both show the same building.

Fig. 3.

Fig. 4.) These items, of entirely different character, having no relationship one to the other, are on a plain background of white sky. The maker of the picture, realizing the impossibility of maintaining unity through similitude, printed a dark border around the print. This lessened the obvious separation existing between the two subjects and gave them the appearance of being units of the same picture.

Thus an opportunity is often afforded to include a frame, either improvised or as provided by nature. In a park, the pictorialist can look for an opening created by trees or branches which will place the subject in a vista and enclose or frame it with greater pictorial effect. Or if it is of an architectural nature, an arcade, or a grille of steel cables will serve as a charming pattern through which it can be viewed.

The foreground is of such importance that upon its arrangement may rest the difference between a poor snapshot and a salon picture. In fact, many a print may not only be improved by the proper foreground but may also become outstanding in pictorial quality. This can be seen in comparing Figs. 2 and 5 with Fig. 6. In the former, the absence or excess

of foreground makes the print pictorially worthless; something seems lacking, though all the buildings are there. In Fig. 6, however, not only is the oddly composed foreground interesting but the unity and composition have qualified it for exhibitions.

Thousands of people visit Washington to see the Capitol building, regarded as the most stately structure in the world. They come from all over the world to see "at last" the dome that marks the central government of this great land; the dome that appears in geographies, histories, magazines, and on postcards — unnumbered prints that have been made — and some exhibited.

Many of these visitors have cameras with which to "shoot" for themselves the national capitol with its crowning glory — the dome — and add more photos to the already numerous pictures of the splendid colonnades and stately monoliths so imposing by day, so impressive in their illuminated white against nocturnal blackness. And good pictures, too, of the architectural reflections in the wet pavements at night.

But always the same background — always the same angle! Until, well, it has become very monotonous. Still the visitors come with their cameras to shoot The Capitol! But why not give some serious thought to foreground as well as background? For instance, a more appealing Capitol picture may be created by choosing a foreground which will add rather than detract from the center of interest, one



• To illustrate the principle of "framing" take any picture of two unrelated objects and draw a black line around it. The "frame" knits the units together. This process is most effective when done photographically.

Fig. 4.

• After deciding that Fig. 2 (previous page) has too much foreground, the photographer climbed out on the girders for this view of the same subject. It looked fairly interesting in the viewfinder because of the warehouse and other elements in the middle distance. But when the print was made, the result appeared bleak, and flat.

Fig. 5.





MODERN BAGDAD

Fig. 6

- The final print, as produced by judicious trimming and slightly lowering the camera angle. In comparing with Fig. 2, note that the foreground lamp (right) now rises above the distant skyscraper tops. The exposure was calculated for the distant objects, reducing the foreground to silhouette form. Use of a filter has darkened the sky. Selection of proper time of day, when the sun is low, gives vertical, modelling shadows to the towering Manhattan monoliths. Zeiss Miroflex camera, S. S. Pan, red filter, 1/25th, f/8.

that will perhaps form a frame for the picturesque part as in Fig. 7. Thus, instead of the monotonously familiar Capi-

tol and its dome, the camera enthusiast can find an unusual angle for a definite and carefully composed pattern to enclose

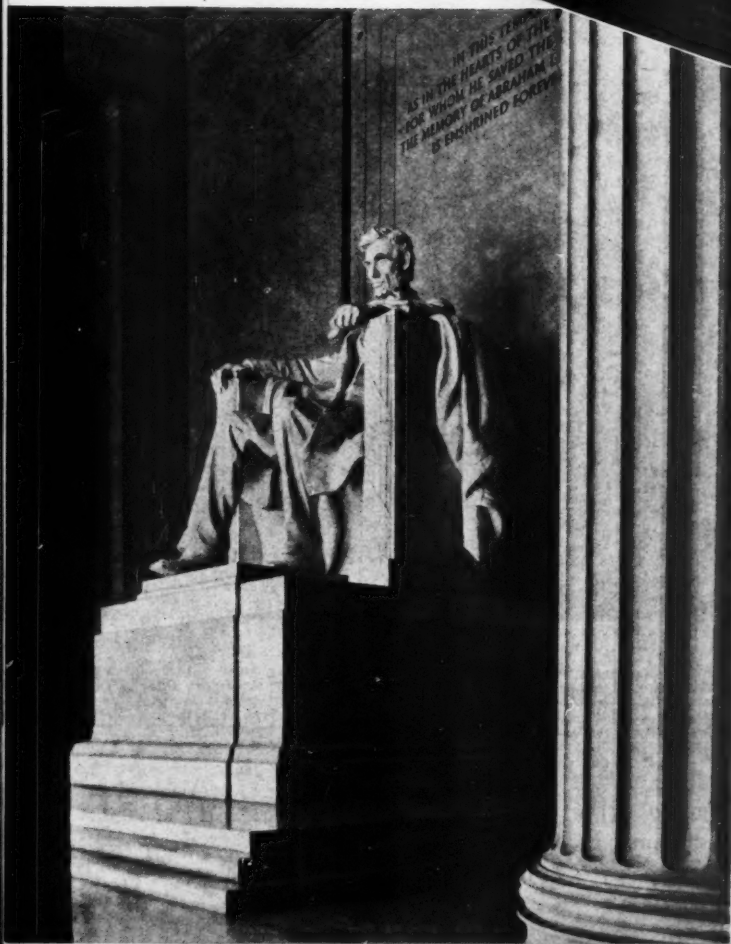
● New foreground treatments rehabilitate subjects which are pictorially trite. The low viewpoint was obtained by holding the camera on the ground. Verichrome film, 1/25th second, f/16.

Fig. 7.

● The Lincoln statue is one of those overly-familiar subjects, yet the foreground pillar makes this composition different. Time exposure, S.S. Pan, 5 seconds at f/16.

PILLAR OF LIBERTY

Fig. 8



the main subject.

Fig. 7 was made with a Zeiss Ica and arranged on the ground glass with camera in the grass, requiring a rather candid position for the photographer because of the low viewpoint. Of course it is only one of several foreground possibilities that can be made with equally interesting results of the same subject.

Now for a glimpse of the much-favored Lincoln statue. It has perhaps been photographed even more than the Washington monument. From any angle it is well liked in foreign ex-

hibitions, seldom rejected and has also been hung in the Royal exhibition. But at home, here in the United States, it is as exhausted as a windmill picture.

Years ago, a print of an old windmill was submitted to a certain salon on the West Coast and returned with the following comment by the judge: "My God, another windmill!" This is the general feeling about Lincoln's statue. Yet, with a foreground as in Fig. 8 which includes a touch of fluted decorativeness, the stone and marble take on a new slant.

This brings us to the point, the necessity for discovering varied patterns for foregrounds from which to choose the best. And foreground arrangements can be applied to pictures of all types, from everywhere. The skyline of New York is a favorite for snapshots as well as pictorial prints. An easy way to secure foregrounds for downtown Manhattan can be found on a ferry, for instance, in such manner that part of the boat is included. Exposure, in such case, is calculated for the distance which gives the foreground insufficient exposure, resulting of course, in a dark mass with little detail, which is desirable so as not to detract from the skyline.



UNDER THE ELL

● A modernistic effect is obtained by framing under the lattice work of the elevated train structure. This foreground composition yields a result radically different from Fig. 1 or Fig. 3. Ihagee camera, S. S. Pan, 1/50th at f/11.

Fig. 9

The Woolworth building is a subject which lends itself well to the architectural type, pictorially. Fig. 3 is an ordinary snap-shot of this world-renowned structure, very common indeed, and done times without number. But, in Fig. 1 the same subject is seen through one of the arches of the Municipal building. The arch of this structure here serves as a fitting frame. A single arch alone will not

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Getting Better Pictures

with a candid camera

THINK OF THESE RULES BEFORE SHOOTING AND LISTEN TO YOUR FRIENDS SAY, "O, BOY, WHAT SWELL PICTURES."

By H. M. BROWN

(International Research Corp.)

WHEN beginning to take pictures, every camera user tends to handle his instrument like a rifle, aiming at the center of attraction before him. A scene is not a bull's eye, however, and the first thing the photographer must learn is to examine carefully every part of the rectangular image in his viewfinder.

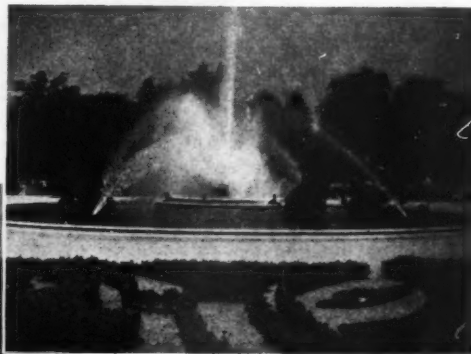
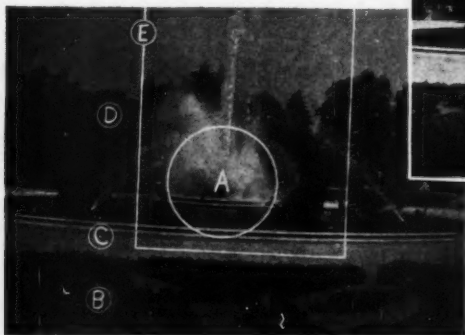
Accurate delineation of the subject is provided by the modern camera's telescopic viewfinder. It should be held as close to the eye as possible, and horizontal or vertical lines brought parallel to the margins of the image.

Walk around the subject watching the changing relationship between the objects in the frame. Note also how this changes the lighting. In the early days of photography, it was necessary to employ frontal lighting in order to have enough illumination to get any kind of

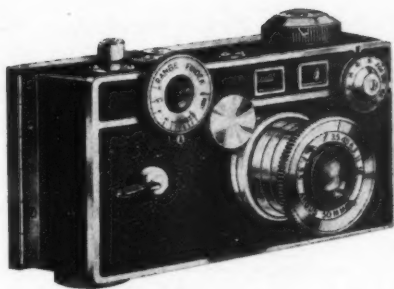
a picture. This resulted in squint-eyed and harshly lighted subjects. Today, for portraiture as well as landscapes, direct frontal lighting is avoided. Use a lens shade to keep direct light from striking the lens.

Before pressing the shutter, arrange in the viewfinder all the component parts of your composition. Pay particular attention to the margins of the picture. Then mentally check:

1. Foreground.
2. Middle distance objects.
3. Background.
4. Center of interest.



● Attracted by a spouting fountain (A) the first impulse is to "shoot" at it like a bullseye. But to make a pleasing composition, do not press the button until first checking these points: (B) foreground, (C) middle distance, (D) background. Include people, if possible, in at least one of these areas. Check each margin, so that the fountain, for example, is not cut off at the top. After taking a long shot, move closer for a dium shot such as that within the rectangle (E).



● A coupled range finder is the feature of the new Argus C2. It has a 50 mm. Cintar f3.5 lens, and shutter speeds ranging from 1/5th to 1/300th second. Standard 35 mm. film is used.

What distance should you shoot from? In Hollywood every important scene is shot from at least three distances. First, a long atmosphere shot is made, then a medium shot and finally one or more closeups. This technique is well worth following and can be utilized without prohibitive expense because of the economy of minicam film. Above all, be sure to take enough closeups.

For street scenes, what is known in movie parlance as a "medium" shot will allow enough details to furnish composition without too great a loss in the size of each part. Use a camera distance of 25 to 30 feet for this type of shot and try to embellish the cold architectural atmosphere with human figures in action. A figure in a metropolitan scene or landscape shot may "make" your entire photograph. It will strengthen the composition and give it "human interest."

Study the size of each image in the viewfinder in relation to the size of the entire field. This will help prepare for a common fault—that of photographing images so small that they are lost in their surroundings. Sometimes this fault can be used to a definite advantage, but when in doubt move in closer.

Above all, see that the object material in

your composition is such that it will arrest attention. Everyone likes the kind of picture that makes him stop and say, "Gee Whiz."

Because of the great depth of focus of miniature cameras, objects at several distances may all be brought into satisfactorily sharp focus at the same time. This principle is taken advantage of in fixed focus cameras which are permanently set at about 15 feet.

Utilizing fixed focus simplicity, the Argus "A" model utilizes two settings so that the camera may be focused either for objects 6 to 18 feet from the camera and from 18 feet to infinity. A third range, from 32 to 40 inches, is obtained by placing a portrait attachment on the lens.

The model AF Argus has a calibrated focusing mount so that perfect focus can be obtained at any position from 1¼ feet to infinity. Estimate the distance from the camera to the object or measure it with a tape and set the footage dial on the camera accordingly. Movie camera men always measure the distance from the subject to their camera with a tape measure before every important scene.

Extremely sharp focus can be obtained by using a ground glass to establish the critical distance. Take the back off an unloaded camera and set the lens at widest opening. Place the glass, ground side in, on the film track; move toward or away from the subject, watching until it is in sharp focus on the ground glass: A

magnifying glass will be of some assistance. The same procedure can be followed with the portrait lens in place for closeups. A convex spectacle lens or magnifying glass may in this way be utilized for copying or other very closeup subjects. This not only gives critical focus but will also enable you to become familiar with the actual area covered



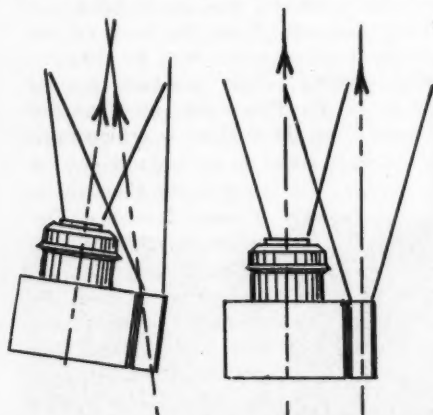
● The first requisite for a sharp picture is a steady camera. Here it is being held firmly with the viewfinder at the bottom and the camera back pressed firmly against the forehead.

by the lens at shorter distances.

The Model C Argus camera has a range finder of the split image sextant type. In focusing the range finder, select a vertical line in the object and turn the range finder knob until the two sections of this line appear as one straight line. Refer to the figure on the range finder scale and set the focusing lens mount to the same figure.

With the new Model C2 Argus, the range finder is coupled to the lens, making focusing easy, rapid and accurate. It is merely necessary to get a vertical image in perfect alignment in the range finder and the lens is automatically set for correct distance. When taking pictures of moving objects, the range finder can also be used as a view finder. This permits following the figure while focusing.

What shutter speed? Use the slowest that will catch the movement of the subject. If the camera is held in the hand, $1/50$ th of a second is the slowest that can be depended upon for perfectly sharp negatives at all times. If the subject is a scenic view with nothing in it moving, or a portrait of a perfectly still subject, a slow shutter speed is often desired. For this purpose a tripod is used to hold the cam-



- When using a portrait attachment, the normal viewfinder takes in a field slightly above the field seen by the lens. See right hand sketch. You can check this yourself by removing the camera back, placing a piece of ground glass on the film track and comparing the margins of the ground glass image with that of the viewfinder. If the camera is being held with the viewfinder at the bottom, correct for parallax by lowering camera until viewfinder shows more at the bottom of the picture than is desired.

8 pages of Argus pictures →

- Cameras of the Argus type are well known for their economy, portability, convenience and ease of operation. Everywhere, today, they are producing pictures of illustrative, pictorial and dramatic significance.

era and then a shutter speed as slow as $1/5$ second can be used.

If the subject is moving, a rapid shutter speed is required—from $1/100$ th to $1/300$ th of a second. A person walking toward the camera can be stopped at $1/100$ th of a second. If he is running or moving across the camera's line of view, use $1/200$ th or $1/300$ th depending on how fast he is moving.

What f or diaphragm opening? For average outdoor pictures in bright sunlight, using pan film, exposure will be $f11$ at $1/50$ th second. Consult the exposure guide in your camera instruction book. An exposure meter is a desirable accessory.

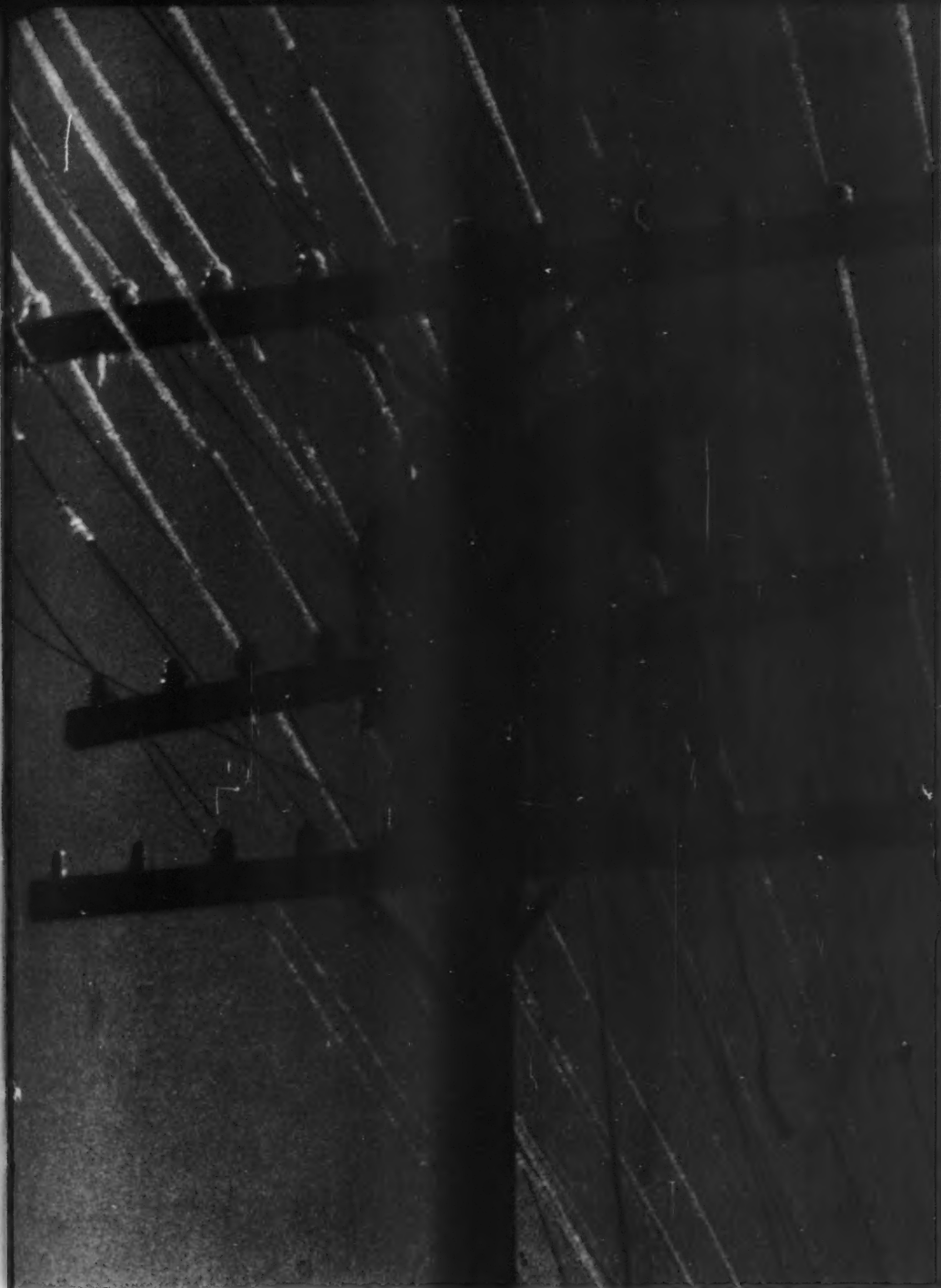
It is imperative that the camera be held absolutely still, unless the photographer is following the image, in which case it is permissible to have a blurred background providing the subject is sharp. Wherever it is possible a tripod should be used, particularly for bulb and time exposures of one-tenth of a second or longer.

Some photographers take great pride in claiming, "I took this shot at a second in the hand," but this seldom if ever actually happens when a good picture is the final result. Get the "feel" of your shutter. Practice pushing the shutter release. A little patience will enable you to do this automatically without jarring the camera, just as a marksman carefully squeezes the trigger; firmly, rapidly and without moving the rifle.

The accessories which are very desirable are a lens shade, a tripod, and a supplementary (portrait) lens.

For closeup work and portraiture the accessory lens is essential. With portrait

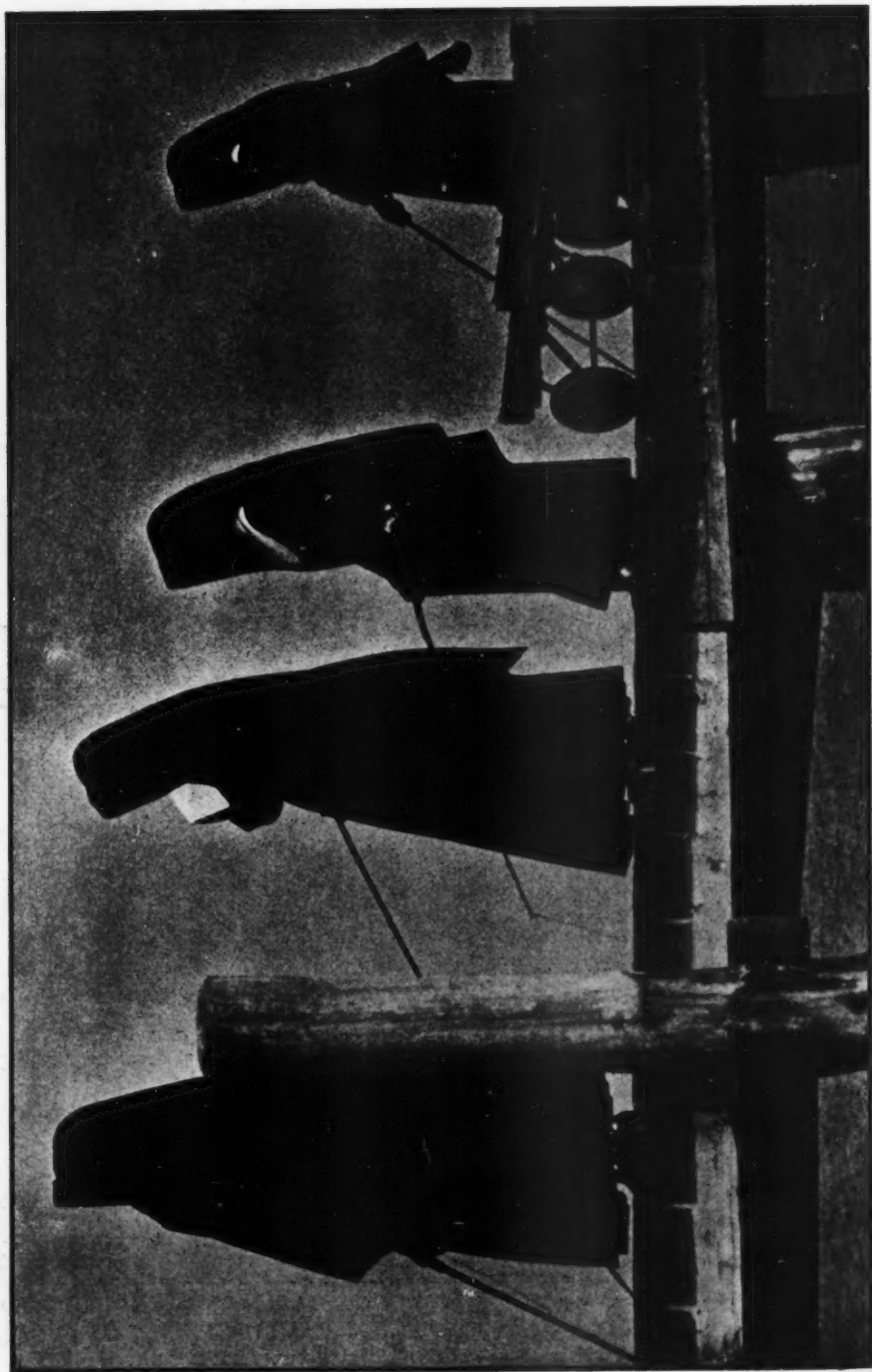
(Page 93, please)



SERVICE AND SLEET

By E. J. CASSODAY

● Argus Model A, Agfa Superpan film, 1/25th second at f/8, yellow-green filter to darken the sky area and emphasize the ice on the wires. Printed on Agfa Brovira Royal.





BEACH DETAIL By S. POWELL HILL

- Interesting because of its unique composition, it was originally a horizontal picture. The maker showed good judgment in cropping to maintain an effective arrangement. Model C Argus camera, Agfa Super Pan, $f/3.5$, $1/25$ th second. Print made on Defender Velour Black, 8×10 using about one-third of the original negative area

SOLE FISHERS

(left hand page)

By MALLET KIMBALL

- A candid shot taken from a small boat floating below the dock. Repetition "makes" this composition by virtue of the identical dress of the nuns, and the fishing poles. Argus camera, $f/8$, $1/100$ th, Eastman Panatomic film developed in D-76.

FELINE

By S. POWELL HILL

- Animals and pets are always interesting, but it's not easy to capture their moods. Because fur absorbs light, flat lighting and twice normal exposure is allowed for subjects like this. Argus AF, $1/25$ th second, $f/4.5$, Agfa Super Pan, printed on Velour Black.





"CAST THEIR SHADOWS BEFORE THEM"
(left hand page)

By WILL LANE

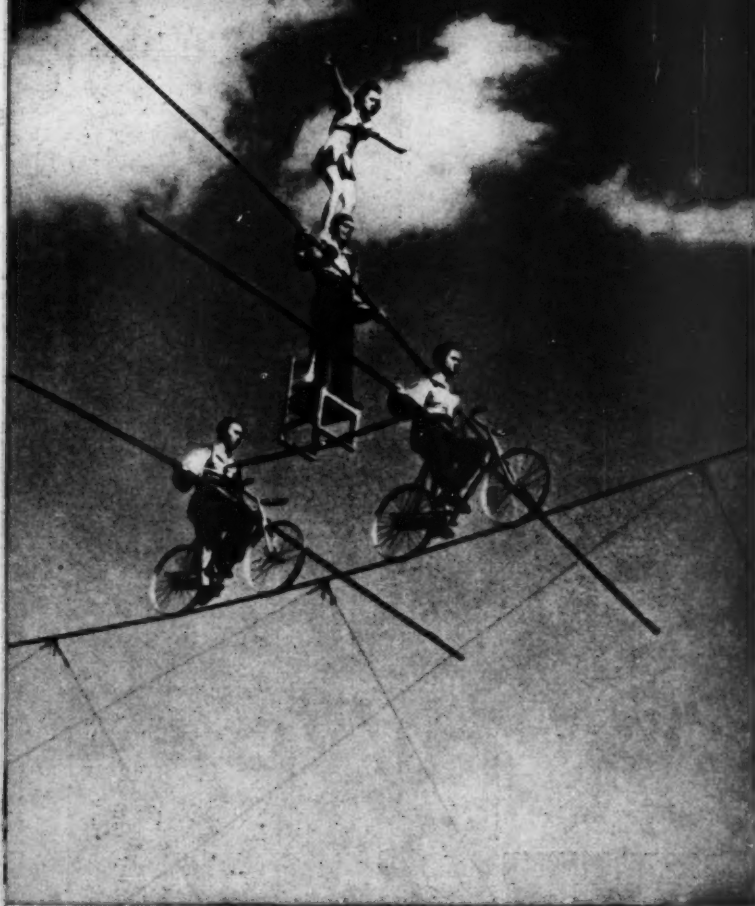
- An Argus snapshot taken from the fifth floor window of the MINICAM office in Cincinnati during a Legion parade at a time that European war threats were giving cold chills to all camera importers. Exposure, $f/6.3$, $1/100$ th second. Gevaert Express Superchrome film.



SURE, POP By N. BERKOWITZ

- To catch closeup, portrait expressions, a range-finder or yardstick is used to keep the camera at the correct distance. This page of snapshots were taken at two feet with an AF Argus, exposure $f/4.5$, $1/25$ th second, DuPont Superior film, 1 flood lamp in a reflector.





BALANCE

By J. WEISS

● The diagonal lines of the wires and poles promised an interesting composition, but the cameraman waited, wisely (if not patiently), until the clouds were in position to emphasize the figure of the girl, the center of interest. Argus C, Gevaert Express Superchrome film, medium yellow filter. /11, 1/50th second.



● A candid shot (right) at a beer picnic inspired by the delicate reverence with which the subject tackled his drink. Argus Model C, f3.5, 1/300th second, Agfa Ultra Speed, developed 18 minutes in Edwal 12. Print on Brovira.

FINESSE

By CHAS. A. BROOKS



NIGHT LIFE

By DON CASTER

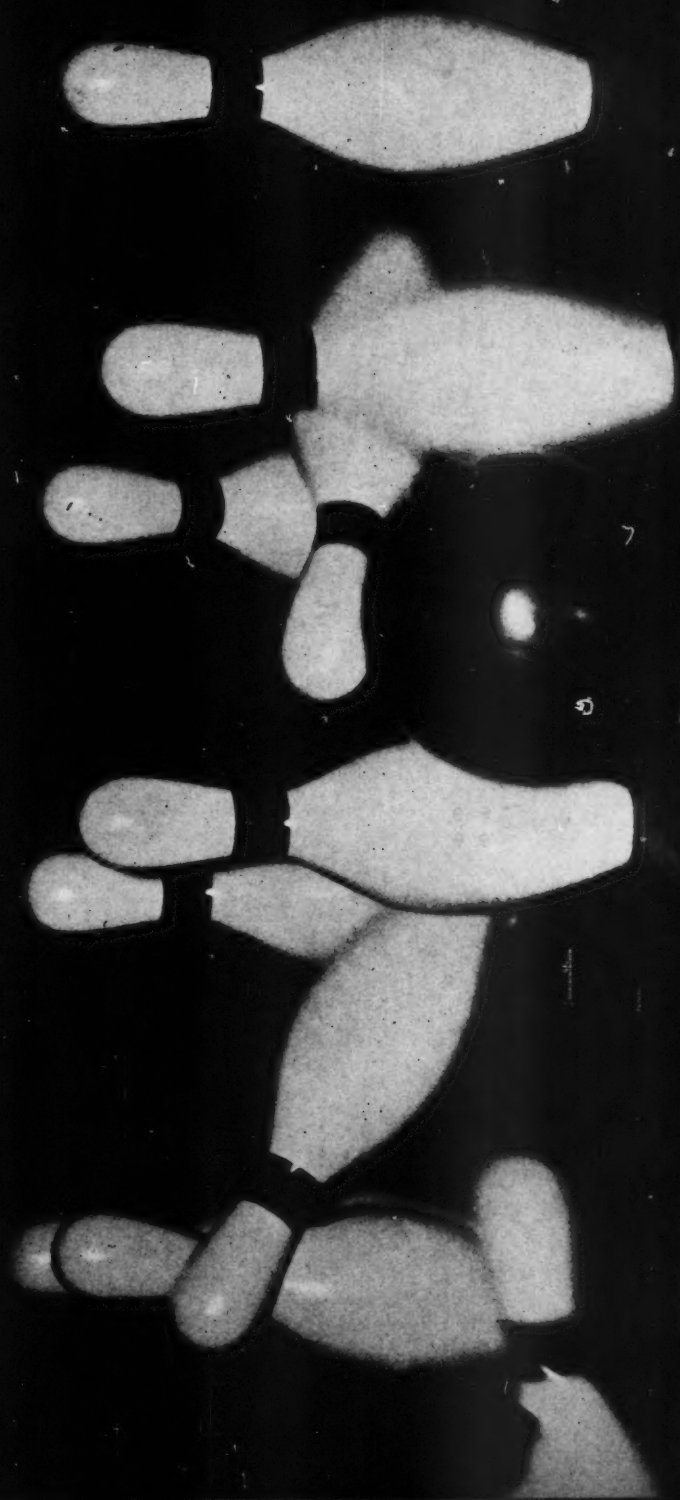
- A typical example of night photography of one of the most popular after-dark subjects on Broadway. Argus model A, Agfa Super Pan, f4.5, 1/25th second. Print on Defender Velour Black, No. 33.

- Performance pictures are easy with the modern minicam. This was taken by ordinary stage lighting, Argus Model C, Agfa Super Pan, f3.5, 1/5th second, Velour Black. Camera was held on the back of a seat.

TOP OF THE WORLD

By S. POWELL HILL





STRIKES BY S. EDDIS



- Hair is a woman's crowning glory. In these head and hair shots, a dark background and one spotlight or unshaded flood lamp (without reflector) is all that is required to make youthful models look beautiful. Selection of camera angles emphasizes or minimizes any desired facial feature. Exakta camera, 1/25th at f6.3, Agfa Superpan, 1 flood light.

Glamour Comes Home

Yet better than reading about the work of "glamourizing" photographers is trying some yourself.

By KELLY YEATON

IT HAPPENS to all of us . . . some brisk, winter day when the sun is out and the birds are singing their fool hearts out, a soft young voice from behind you says, "Oh, Mr. Kelly, I saw some of your pictures and I think they are just *wonderful*. Could you make me look like Carole Lombard?" That will finish off the the birds and the bees and the buttercups. You won't see another all day. The safest thing is to say, without turning around, "No! You don't have a photographic face and nothing can be done about it." But you don't, because you haven't the heart. You turn around, look at those appealing eyes, open your mouth, and bite off more than you can chew.

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- With the model relaxed, the lensman has plenty of time to move the camera and one light for various effects. A separate viewfinder is handy for studying compositions before bringing the camera into play.



- Would you picture a night of storm, snow and sleet? Just use a fair-weather negative and do the rest on the print.

- "Stormy Weather," (above) and a straight print (right). Both are from the same negative.



SNOW AND RAIN

— a la carte

No more waiting for the weather man, to picture weather—foul or fair

By S. J. RESSETAR

Illustrated by the Author

RAIN, snow and stormy weather are not easy to photograph. With these subjects, the real thing seldom looks convincing. Nor have we always the time to wait for a desired Jack Frost or howling Northeast wind.

In such cases, the alternative is—make

your own weather! Neither negative or print is touched. It's all done with screens during contact printing or enlarging. And a "weather printing screen" is no more than a paint-spattered piece of window glass!

It is necessary only to have a piece of

● Choose day or night, tropical rain or arctic snow—as you like it. Here one scene depicts a moderate snow (right), and rain and sleet (bottom). The center picture is a straight print taken on a rainy day, 1/25th at f4.5, Agfa Superpan Press film. All made from the same negative.



glass slightly larger than the size of the print to be made; an old tooth brush; a sheet of black paper and a bottle of show-card white obtainable at the dime store, or artists' supply house. For the rain effects a quarter-inch artist's bristle brush is needed.

To make a snow screen, the tooth brush is used. When bristles are moistened and a thumb run along them, the bristles jump back spattering water. This is

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Reflectors

What Good are They?

It takes 4 to 8 bulbs in improper reflectors to furnish as much illumination as 1 flood bulb in a reflector of correct size!

By RALPH HABURTON

AS professionals and amateurs all use flood bulbs these days it is important to know what sizes should be used. Precise data is especially important when exposure is decided by the simple expedient of counting the number of bulbs in use and their distance from the subject. Sensational results are predicted—and realized. But let's describe the tests from the beginning.

Let's take a few bulbs and reflectors and measure how much light they furnish and just what the correct exposure would be in each case.

We seat our subject so he will be comfortable, and with a tape measure adjust our light standard to exactly 6 feet from the subject's face.

This light will remain at 6 feet throughout the tests. The shutter will remain at 1/5th second and super pan film will be used. With these factors settled, the only

adjustment to be made will be the lens opening.

Now let's unwrap some new flood bulbs, and insert a No. 1 (small) bulb in the socket, without the reflector.

Correct exposure, our meter tells us, now is *f*2.8.

What will happen if we use a multiple socket and two bulbs? We try it: *f*4. The light on the subject has doubled. We try three bulbs: *f*5, fully three times as much light as one bulb.

Now let's try the No. 2, medium size, bulb. One No. 2 calls for an exposure of *f*4. Thus it furnishes exactly twice the illumination of a No. 1 bulb.

So far so good. The bulbs, when used without reflectors, provide light exactly proportional to the size and number of bulbs used.

Now let's try a small (9½") reflector. The No. 1 bulb without a reflector called for an exposure of *f*2.8. In the reflector,

EXPOSURE TABLE FOR NEW FLOOD BULBS WITH VARIOUS REFLECTORS

	No Reflector	Small (9½") Reflector	Medium (11") Reflector	Large (16") Reflector
One No. 1 bulb.....	<i>f</i> 2.8	<i>f</i> 6.3	<i>f</i> 5.	<i>f</i> 8.
Two No. 1 bulbs.....	<i>f</i> 4.	<i>f</i> 8.	<i>f</i> 6.3	<i>f</i> 8.
Three No. 1 bulbs.....	<i>f</i> 5.	<i>f</i> 9.	<i>f</i> 7.	<i>f</i> 8.
One No. 2 bulb.....	<i>f</i> 4.	<i>f</i> 5.6	<i>f</i> 6.3	<i>f</i> 8.
Two No. 2 bulbs.....	<i>f</i> 5.6	<i>f</i> 7.	<i>f</i> 8.	<i>f</i> 8.

Above lens openings are for a subject 6 feet from the light source. Table shows "*f*" number to use for a speed of 1/5th second and Superpan film.

For a shutter speed of 1/25th second, lights should be 3 feet from subject.

Allowance may be made for the use of other shutter speeds or films. For a complete table of relative shutter speeds and lens openings, see MINICAM for October, page 28.

● Relative size of the reflectors named. The small one is 9½ inches in diameter, of the type designed for use with the small (No. 1) flood bulb. The medium reflector (11-inch) is adjustable. The large reflector (16-inch) is designed for the "giant" or professional size (No. 4) bulb, and is equipped with reducing adapters.



the required exposure is reduced to $f/6.3$. This is two and a half stops less exposure. Because of the reflector, the subject gets six times more light!

The efficient reflector always increases effective illumination, and this increase may be from four to eight times.

Now let's try two lamps in the reflector. Will it double the amount of light? The reading for one bulb was $f/6.3$. For two bulbs in the same reflector, however, it is $f/8$. This is only half a stop; the light increase is only 50 per cent.

To check on this conclusion, we try three bulbs in the small reflector and then one, two and three bulbs, respectively, in the medium-size reflector. In each case we find that *the second or third bulb inserted in a single reflector is only fifty per cent efficient.*

Thus, three No. 1 floods in a single reflector do not triple the light output of one, but only double it.

For maximum efficiency, use an individual reflector for each bulb.

This point is illustrated again when we try the large reflector. In this reflector, the amount of effective illumination remains the same regardless of the size or number of bulbs used, as shown by the table on the preceding page.

Conclusions:

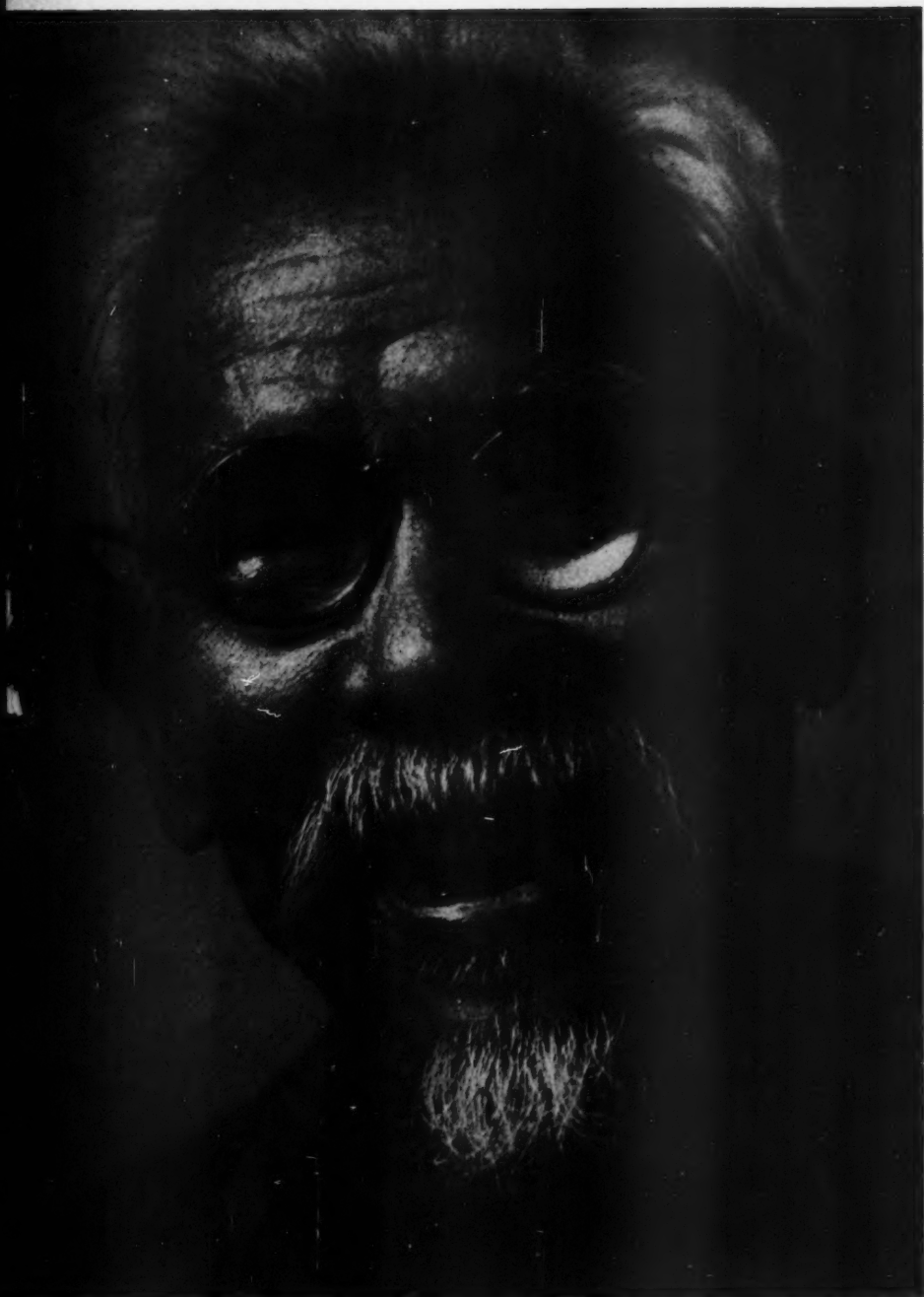
(1) Efficient reflectors will increase light output from four to eight times.

(2) A small reflector designed for a particular bulb often will give more light than a larger one not designed for that bulb. (The No. 1 bulb gives more light in a small reflector than in the medium-size reflector. This is not due to poor design of the larger reflector; the No. 2 bulb gives more light in this reflector than in the smaller one.)

(3) Using a larger bulb does not necessarily increase illumination. (The No. 1 bulb gave more light in the small reflector than the No. 2 bulb did in the same reflector.)

(4) Increasing the number of bulbs in a reflector does not give a proportional increase in light.

(5) Flood bulbs decrease gradually in efficiency. The exposure table given on the preceding page is for new bulbs. Increase exposure time one-half stop for bulbs which have seen one hour's service.



CHAN

Fig. 1

● The final print, that is what counts, says the pictorialist—the result rather than the means used to obtain it.

Pictorialist vs. Purist

First, for the disciple of pictorialism, comes the photographer's feelings and emotion

By C. STANTON LOEBER

Illustrated by the Author

BECAUSE pictorialism is the particular phase of photography that is my hobby, because it is the most fascinating hobby I've ever known, I try to teach it in my classes. If the spark is there, it is easy; if there is no spark, it just can't be done.

And when I say spark, I mean the feeling for balance, for rhythm, for spacing and composition, the feeling for beauty. That is all there is to pictorialism. Art in photography, it might be called.

But the Purist, lacking this feeling, defines art as truth and truth as fact. Not knowing life is too much fact and too little of the idealistic, he pictures facts. All too often they are ugly and hideous.

He pictures ugly women heavy with pregnancy. That is social photography, he says. He pictures the factual scene of an ugly tenement; "435 Sixth Street" he labels it. That is his documentary photography.

Then he pictures a bed pan in all its pristine purity. Yes! That print hung in one of the leading and most "modern" of San Francisco's Art Galleries. It was by one of the purest and most widely acclaimed of Purists. That, perhaps, is pure photography.

Technically his work is perfect. By stopping down to f64 he is as sharply crisp as frozen lettuce leaves. Print quality and negative are ideal. His glossy prints shine like glass desk tops.

Technique has become his god. He

worships mechanical results, superb craftsmanship, forgetful that the century long cry against photography has been against its lack of soul.

Horace Bristol has said, "Any normal high school boy or girl can learn to do technically correct work within one year's time." Mr. Bristol is one of the few Purists whose work has hung in pictorial salons. But every one cannot be a pictorialist, any more than every tap dancer a Mary Wigman.

"Art," it is said, "is an idea seen through a temperament." One temperament brings the feel of wind in the sky. Another, the gurgling of a spring brook, a third the majesty of a sunset. Three

pictures, these might make, all from the same spot but influenced by three temperaments. Each has caught and presented his own emotional reaction. It may be soft or sharp in



● The full frame from which "CHAN" (previous page) was composed. Cloudy sunlight, f5.6, 1/50th second.

definition, high key or low key. But if the maker has just a wee bit of the divine spark, you feel with him the thing he felt—not the thing seen by eyes alone—but by feelings.

That is where the Purist fails. He sees but does not feel. He is factual, not emo-

This is one of a series of articles by well-known photographers, each expressing his individual point of view and approach. COMING: "Pure Photography," by a well known Purist.

tional. He does not know that the poetry, the dreams, the fancies of life can be more real than facts. The dull label, "435 Sixth Street" marks him and his work. Imagination lacks.

Truth is what he seeks—literal truth. "The lens impresses pure truth on the negative and the negative duplicates that truth on the paper." But this is not so. How do I know? Well, I walk with the Purist in his hour of travail. He comes to my classes seeking pictorial secrets.

Recently one of them was quoted, "Cropping? That's something I've always thought was done to horses' tails. But if it is trimming you mean, I never trim. I compose to the very edge of my 8 x 10 negative."

That is one Purist's fetish. But have you ever tried to compose to the edge of your negative? Or have you ever carried an 8 x 10 in your vest pocket? Composing to the edge is simple if you have a battery of lenses. But most of us have one camera and one lens. And usually that lens takes in about twice as much as we need. So we trim for better perspective and composition.

There is a purist who writes profusely and well. With a protractor to measure his angles, dividers and rulers to split hairs, he will laboriously prove the perfection of a composition down to the last decimal.

But composition should be a thing as free and spontaneous as the winds that bend the tree you picture. To the Purist, art is technique. You hear the word constantly. Over and over you hear it, like the chanted mumbo jumbo in a voodoo incantation. Technique! It is like the cease-

less roll of drums in an African Forest.

Technique—brilliance and sharpness—is the goal of every beginner. But it is a means to an end, not a goal

in itself. Once attained, the preoccupation with technique passes like growing pains. Most beginners grow up. Some say the Purist stops growing at this stage.

Because mechanics have become his god, the Purist permits no after treatment of negative or print. It is "pure." Some even condemn the practice of dodging while printing.

And the pictorialist? Well, I sneak around on Olympus too. He claims the picture is the thing. Technique and mechanics are only tools. The end product, not the negative but the print, is what counts.

True, in the not too-distant past, he inked prints and used screens to hide defects. No picture was ever sharp. Back grounds of fence posts, barb wire and cactus patches were changed to scenes of rolling hills, billowy clouds or surging seas. Bromoil, paper negative and other non-photographic processes were rampant. The ideal was the painter's grand manner.

When the pictorialist does not know his technique, his result is a hybrid, neither photograph nor painting.

Perhaps it was in revolt that the Purist set up his shrine of worship of things mechanical. If so, he has done his part.

Visit any salon—peculiarly, all salons are for the pictorialist—and you will find little that is not photographic. If one must alter tonal values to preserve the spirit of the picture, it is done with moderation. It still is photographic. The hand work is not seen.

And while the Purist inveighs against the pictorialist and against salons, and the salon exhibitor sneers at the growing pains of the Purist, what's the difference?

Most of us are neither Purist nor pictorialist. We are glorified snapshooters. Photography is a grand hobby and an outlet for the creative urge, the strongest in mankind. When we fulfill that urge, there is no greater pleasure.

The illustrations demonstrate the pictorial approach. The small print of "Pedro" is from the full negative. Though taken from about four feet with a com-

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● "PEDRO," as he appeared in the viewfinder the moment the shutter clicked. Exposure 1/50th second, f/8.



PEDRO

Fig. 2

- Moving the subject might have destroyed his spontaneity, so he was shot despite a distracting background. A small print was cropped to decide the composition, then an enlargement made. The background was darkened with megilp. This properly centralized attention on the facial highlights for a dramatic effect.



TRAINS

● For pictorialism, busy yards and stations provide dynamic compositions with puffing monsters of steel and steam. Photo by Guida. Exposure f/6.3, 1/100th second.

Photographing railroad cars, locomotives, stations and kindred equipment is a year-round hobby for the transportation-minded.

By WALTER A. LUCAS
With Author's Illustrations

FOR railroad fans, photography always has been an important adjunct to their hobby. More and more camera fans now are taking to the fascinating hobby of collecting pictures of railroad subjects. The two hobbies have been

brought together by the efficiency and convenience of modern minicams.

Of the more than 50,000 railroad fans in this country, there are specialists in views of stations, yards, and moving trains, but by far the greatest number



● A good example of locomotive photography (right) that portrays the machine at its best. Time shot, 1 sec., f/36.

● A typical "railroad fan" group on the job (left) photographing a specially "spotted" engine. Railroads like to cooperate whenever possible. Time exposure, f/11 at 1 second.



specialize in collecting pictures of locomotives at rest to illustrate the mechanical details of the machines.

Railroad company officials readily grant permission to enter the larger terminals and shoot the wealth of subject matter. Railroads generally welcome publicity and some of them arrange special railroad fan trips for this purpose. On such trips, locomotives, cars and other equipment is spotted in good positions for picture taking.

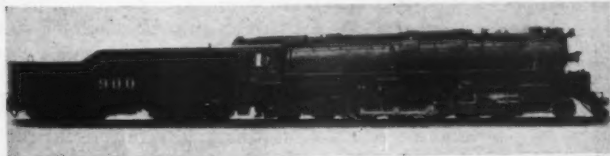
The camera-railroad fan uses most any camera capable of giving a clear, sharp picture with the maximum of detail. Because the subject is elongated, cameras taking rectangular shaped negatives are more suitable than those with square frames.

Angle views, extreme closeups or other unusual effects are sometimes resorted to for design or purely pictorial results. This sort of treatment, however, does not in-

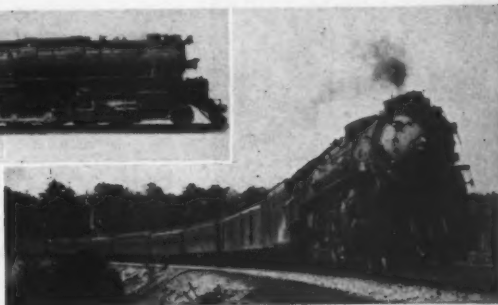
trigue the railroad fan who wants a perfect record of a piece of machinery. Action pictures, and compositions in which smoke and steam are present also provide exciting compositions, but this also comes under the heading of unusual rather than usual treatment.

The most accurate proportions of an engine as a whole are portrayed in what are known as "builder's prints." For this purpose a locomotive is photographed at rest without any appearance of smoke or steam, and from a sufficient distance to show the proportions of the machine in relation to each other. The builder's pictures are usually taken by professional photographers from opposite the cylinders or fore-part of a locomotive and include its full-length. This type of view is the goal of the traditional collector of locomotive pictures.

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● This is the way the locomotive builder photographs his product (above). Photo by Lima Locomotive Works.
● Moving train rounding a curve, speed 45 miles per hour. Mid-day, Sept. 30—1/100th second. F6.3, Verichrome. Bright sun light. Photo by W. A. Lucas.

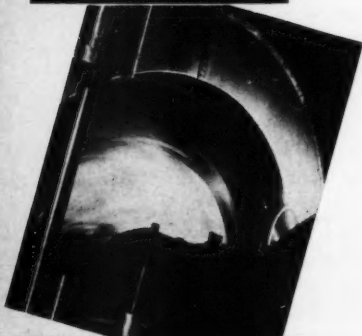


Industry's Photographer

William Rittase scorns montages, prefers combination printing and uses strong words to express his remarkable viewpoint.

By JAMES HARVEY HEBB

Illustrations from William Rittase



● Separately, the three negatives gave the above three prints. Placed together in the enlarger and printed as one, they produced the dynamic composition on the following page. Speed Graphic, 3 1/4 x 4 1/4. Fig. 1

"WHY on earth did you make a thing like that?" William Rittase pointed to a print in a camera club competition.

"Well—ah—er—". The contestant couldn't find a word of defense for the print on which he had lavished painstaking hours, composing, printing, mounting. Under the keen Rittase eye, it withered into insignificance.

But sometimes a man attempts to defend his work before the critical glance and booming voice of the master of caustic comment.

"I made it because I like it." This justification Rittase recognizes and accepts wholeheartedly.

He's a dynamic force at a camera club, but in his studio, Rittase is a whirlwind. On industrial assignments, he has no peer for taking a generalized idea and dramatizing and crystallizing it on paper.

The force of his personality is tremendous, full of rough, healthy vigor. He is gruff to within a hair of rudeness—a man who stands so completely within himself and on his own merits that he doesn't care in the slightest whether one likes him or not, and doesn't care who knows it.

There are those who don't like him—and those who do, among them the students of Temple University in Philadelphia, where he teaches the finer points of photography.

An odd combination, he cuts short telephone interviewers, yet sits talking for hours discussing little things like the amount of alkali in his developer.

Although he has a photographic technique beyond the reach of most men, he scorns technique. His god is ideas—and this worship has brought him profit and recognition. He combines an artistic sense with the ability to put grace and rhythm into industry, smoke and turning wheels.

A client desired to use photographs showing that industry was waking up. The picture had to



FULL STEAM AHEAD

● An excellent example of feeling for industrial subjects is revealed in this combination print. Three negatives were made, placed together in the enlarger and printed as one. Bustling factories, steel skyscrapers going up and the whirling wheels of production—these words the photographer translated into form with telling force.

FIG. 2

have life—smoke coming out of chimneys, wheels turning, men working and looking glad about it. "With factories shut down, we had a hard time getting the smoke," he says, "but we did."

The theme of industry waking up

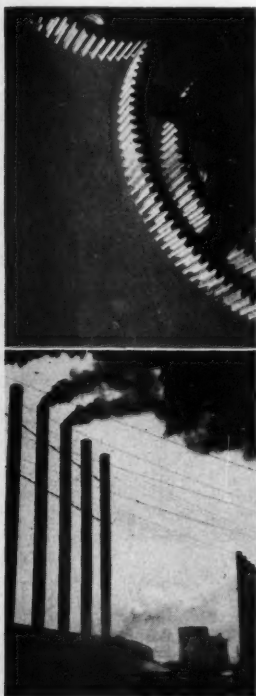
(Fig. 2) called for action. Action meant steam to him. Not studio vapor, but the genuine product of high-pressure power boilers.

Motion, too, was demanded, and that meant curves. Not the curves of feminine

beauty—that might be quite another assignment—but the whirl of wheels. So a generator armature was shot. It was only a few feet across, but in the final print the semicircle of the generator is seen sweeping like a rainbow across the smokestacks and sky-inspiring girders.

A third pictorial element was needed, something to give a feeling of building. For this, the men-on-the-girder picture was used. The workers themselves carry the idea of building, and the strong diagonal gives a sense of force and power.

"This picture is a combination print from three negatives, because we couldn't get everything for the picture in one shot. It's not a montage. No; in a montage you print negatives separately, masking portions of the paper, and probably making enlarger adjustments between exposures.



• Interesting pictures, but they lack meaning. Separately they are ordinary—most anyone can do as well. But see what happens when the two are combined on the next page. Fig. 3

Even the best of montages show evidence of different negatives; dark lines between the component parts indicate where one negative leaves off and another begins. Look at this print—see how one thing blends into another? The movie boys call that 'lap dissolve,' and I can't think of any better way to describe it. Everything overlaps, and blends smoothly."

Anyone can make a com-

bination print or "lap dissolve". The problems begin with the original exposures. Each picture must be centrally placed in the negative with plenty of free space around it. This is to keep all the negative edges outside the final picture area. A negative that ends within a composition naturally will show a sharp line.

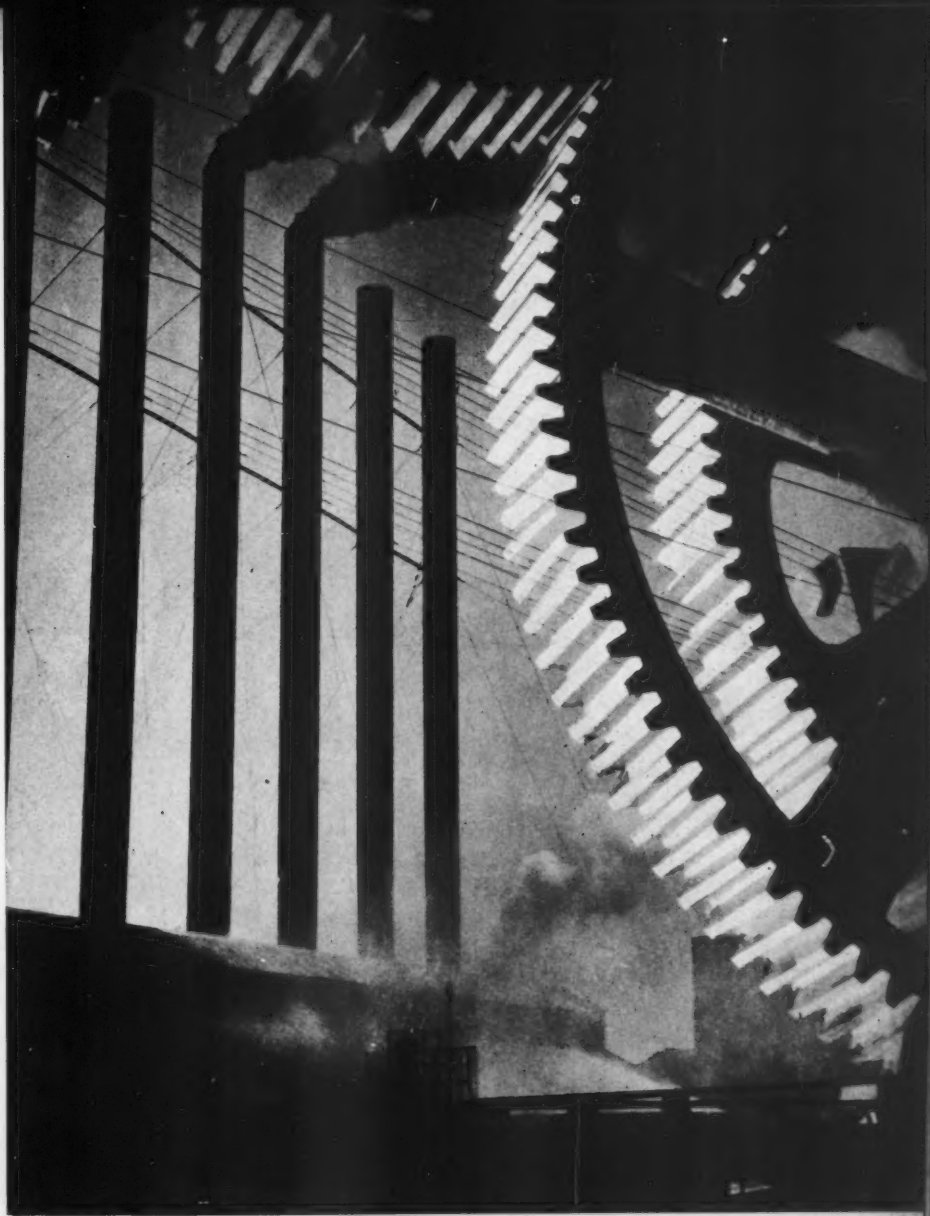
A feeling and appreciation for design is important in planning a picture and in arranging the negatives in the enlarger. The negatives are all put together between glass and adjusted for proper composition, then printed together at one printing. If a composition is laid out in advance and the negatives are not the proper size in relation to each other they are reproduced on Agfa copy film to the desired dimensions.

In a montage, where the negatives are printed separately, the enlarger can be adjusted between individual exposures. If the same degree of enlargement does not suit all the negatives it can be changed until it is satisfactory. On the other hand, combination printing, where the negatives are printed together, requires that all negatives be of correct proportion. If one is not of suitable size, a copy negative is made by reduction or enlargement.

The exposures are kept at a minimum and the negatives matched for density. Rittase's enlarger uses a 1,000-watt, stereopticon bulb, requiring only 10 to 20 seconds to print through three negatives for a 11x14 inch print.

Rittase's words make the job sound more simple than it was. Hours of work with pencil and scrap paper preceded the photographic work, and the Rittase desk was piled high with sketches leading toward an effective arrangement of the pictorial elements.

Planning saves materials and time in the darkroom, if preliminary steps are taken with lead pencil instead of silver bromide. When the shooting begins, the photographer knows exactly what he is after. He has laid a groundwork that serves him just as blueprints serve a



GEARED FOR PRODUCTION

FIG. 4

- Vertical smokestacks aim at the sky, only to be harnessed to earth by the gears' circular forms. An almost literal interpretation of a figure of speech. Two negatives (see Fig. 3) were put into the enlarger and printed as one to create a composition with the apparent message and punch that advertisers most desire.

builder, and when he prints, he is following a definite plan.

For combination subjects, he says, choose subjects that fit. For a winter scene, don't attempt to include a summer cloud negative. The lighting in the sev-

eral negatives naturally must come from the same direction. Otherwise a print will have a "phoney" appearance even though you can't tell at first that it is the lighting which is wrong.

(Page 79, please)

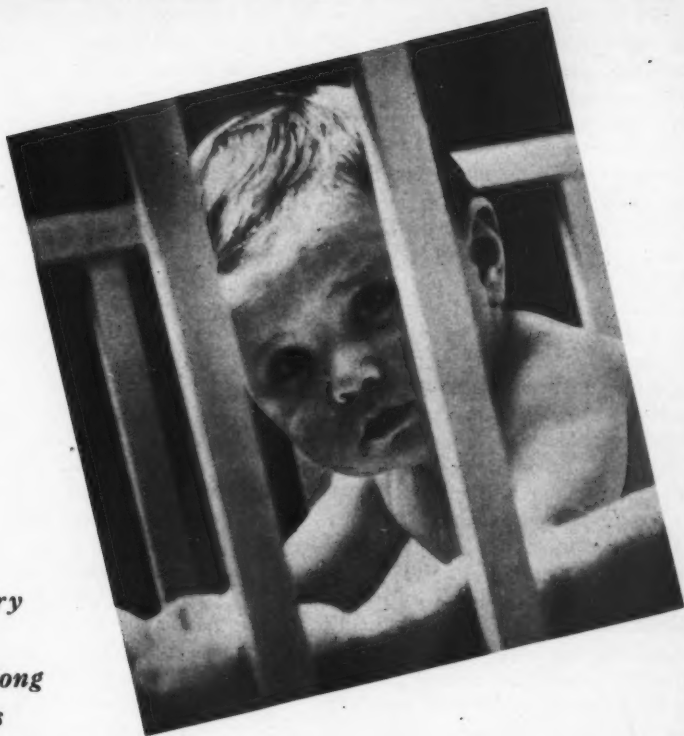


CHERUBS

By H. ARMSTRONG ROBERTS

- Montage is the easiest method to combine a number of subjects or the numerous expressions of one subject. The above was made by enlarging 12 negatives on one sheet of paper. It also may be done in contact printing. The pictures selected must have black backgrounds. As each negative is printed, the unaffected part of the paper is masked off with a sheet of black paper.

*The Story
of
H. Armstrong
Roberts*



“Babes” in the Studio

About a venturesome, vagabond, picture-taking career and an equally unusual specialty

By J. T. GREENE
Illustrated by Roberts

TO MOST people perhaps, “H. Armstrong Roberts” is only a phrase remembered from its appearance beneath photographs in their favorite magazines and newspapers—an impersonal, corporate name appearing in conjunction with the words “Copyright by.” Actually, H. Armstrong Roberts is a man of young middle-age whose career has taken him around the world and into a variety of occupations. He wasn’t always a maker of photographs. His life has been unusual, eventful and adventurous. At sixteen, impelled by the desire to travel and

write, he shipped out of Philadelphia on a cattle-boat bound for Liverpool. As a seaman, young Roberts travelled the world and learned about life in many lands. When ships were scarce, he worked as opportunity provided—in round-houses, in a Barbary Coast restaurant, on railroad construction in Mexico, as an actor with a Pacific Coast stock company—and he learned people and personalities. Always he was following adventure over the earth and writing its story as he lived it.

The first “photographs by H. Armstrong Roberts” were made to illustrate

his own travel books and articles. Illustrated lectures followed with a tour of Eastern cities, and soon editors began asking for permission to publish certain pictures. The demands for his photographs continued and soon his camera-work increased to the point where there was little time left for writing. For the past twenty years, he has devoted himself almost exclusively to photography.

While the H. Armstrong Roberts' collection includes an unusual variety of subjects and places among its more than 200,000 negatives, his work with babies is of particular interest for a photographer who has led a vagabond career while still finding time to make more photographs of babies than any other single subject.

Contradictory though it may seem, to be a successful photographer of babies, a man must have unending patience, persistence, plus the agility of a healthy squirrel. Patience to hang on and wait quietly for opportunity when his subject finally does something that makes a picture, and the rapid-fire ability to record pictures quickly when the baby suddenly goes into a flurry of picture-making action. To

● Select a background of neutral white or gray tone and limit the props to one or two toys, or a pillow or chair such as the below. Exposure f/3.5, 1/100th second, pan film.



date, Armstrong Roberts has made the surprising total of more than 50,000 photographs of babies, and his work is used in important national advertising, and for cover-page or article illustrations in magazines here and abroad.

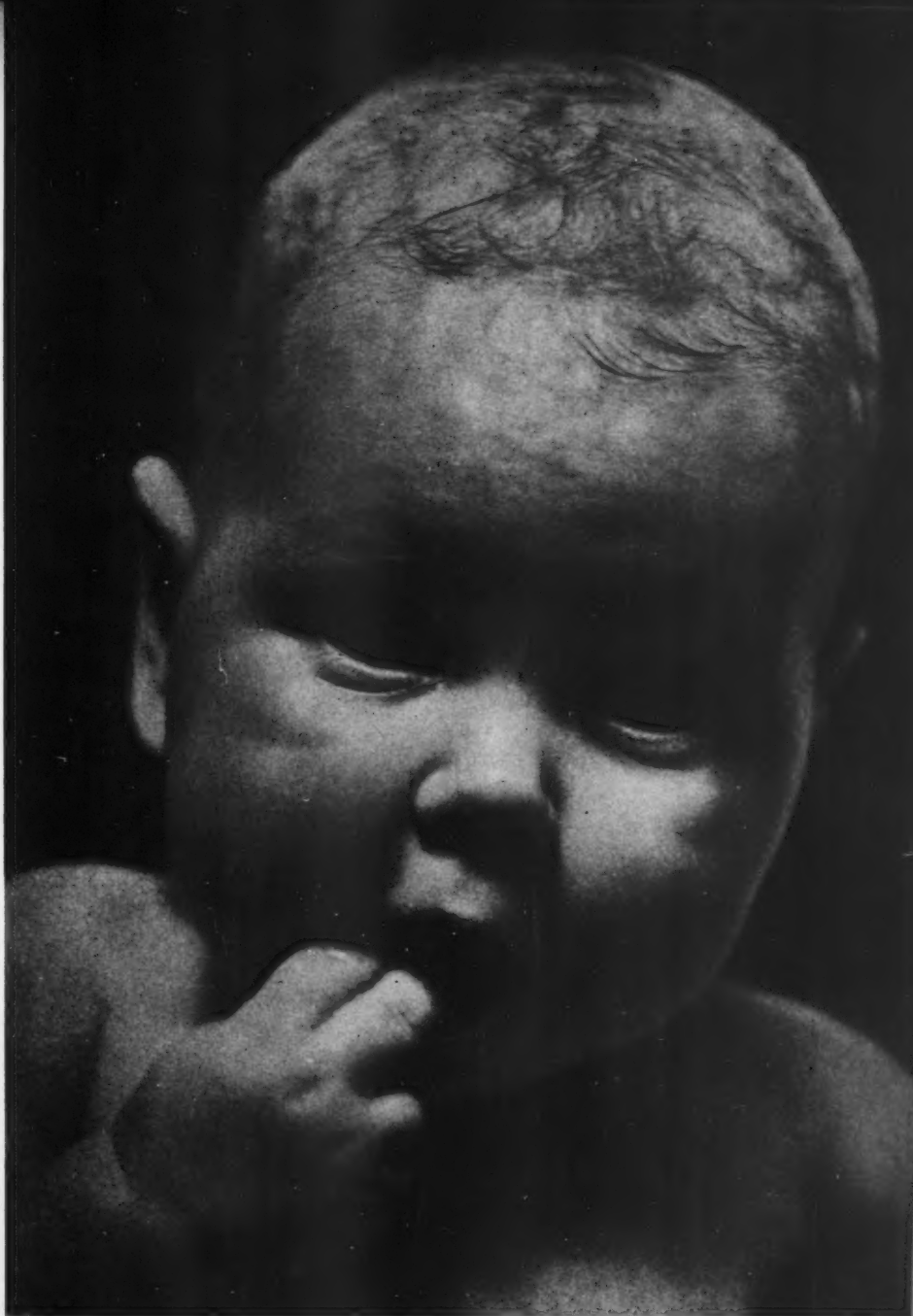
It's a trying and exacting job. After a couple of hours in the studio, striving to capture fleeting baby expressions, Roberts knows he has been working. But it is one of his most interesting and satisfying assignments.

The very unexpectedness of baby actions makes for the consuming interest to be found in this branch of photography. At any moment, at any second, the baby is likely to reach for a doll, a toy, a cake of soap, and pick it up for quizzical inspection. Or the child may turn to look over his shoulder and flash a spontaneous laugh at the lens. If the photographer is alert, he has an outstanding picture. If he is asleep at the trigger, he has no picture at all. Just as disappointing as no picture is one made after the peak of an expression or action.

One thing is certain: You cannot pose a baby. You can't say, as you might with an adult model, "Now let's have that again!" The baby does his own posing, and you catch the expressions or bits of action in the split-seconds of their existence—or you don't get them at all.

In addition to being quick with the trigger, it is essential that the photographer have a high degree of speed in the actual handling of his camera. The use of a hand-camera is recommended, rather than the conventional studio-view camera with its enveloping focusing cloth and cumbersome plate-holders.

Some unaccountable sound or object will strike the spark, and your tiny model starts to perform. Then you'll want speed at the trigger and in the camera handling if you are to take full advantage of your opportunities. In shooting for a sequence, Mr. Roberts may expose negatives at the rate of one hundred per hour. Much culling and editing will be done later, of course, to find outstanding material.



WHAT'S THAT FUNNY BOX?

By H. ARMSTRONG ROBERTS

- The dramatic treatment usually is reserved for character parts and is not considered appropriate for children, especially babies. Here the youngster faces the camera without batting an eyelash and is well on the way to selling himself to an advertising agency or other organization desiring a measure of forthright baby appeal. Graflex camera, 1/25th of a second, $f/4$, by light of nursery window. No artificial light was employed.

- Flat lighting is used for the diminutive subjects. If two flood lamps are used, they should be placed to illuminate the subject evenly, without deep shadows. If daylight through a window or skylight is used, illuminate the shadows with a reflector such as a white sheet or a large white cardboard.



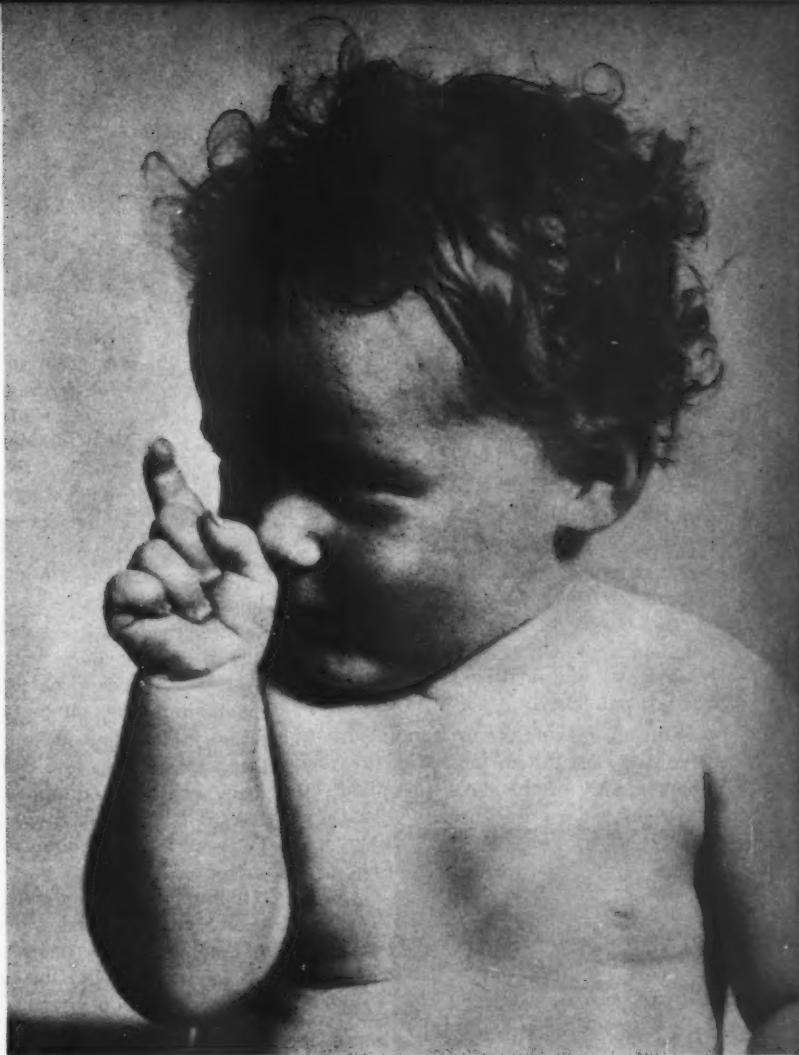
When photographing babies in his studio, Roberts uses a reflex camera, usually at about $f/8$ or $f/11$ depending on the depth of focus required and the strength of the light.

The shutter speed used is from $1/25$ th to $1/100$ th of a second, depending upon the activity of the child and the strength of the light. This latter is determined with a Weston Exposure meter as well as by many years of practical experience.

Color work is done with several cameras, including a Leica, Contaflex and a



● It's like a stalking game. Ready to shoot at the tip of an eyelash, but prepared to wait for patient hours, the child photographer anticipates and captures fleeting expressions. Graflex camera, pan film, $f/4.5$, $1/50$ th second.



Rolleiflex equipped to use standard 35 mm. film.

All of Mr. Roberts' photographs of babies and young children are made in his own studio under glass, using natural light. The surroundings are the same as you'd find in an average home, and there is no battery of artificial lights or other studio paraphernalia which would be foreign to the child and which would probably cause it to "freeze" or develop stage-fright.

The studio has a glass roof to take full advantage of sunlight, aided and controlled with a few large white screens

which act as reflectors. During the months of May, June and July, when the sun gives too much of the overhead light, only reflected light is used, and some striking effects are secured.

In the pictures, it looks as though the child is all by itself. In reality, there are always two or more trained assistants within arms reach of the baby, yet safely out of the camera's range. Frequently, the assistants can quicken the child's interest in objects, cause it to glance momentarily in a desired direction, or facilitate continuity of action for a sequence

(Page 77, please)

The Camera

By DR. OTTO BETTMANN

"WELL," said the gay Parisians of the very gay Sixties, "we can certainly take a joke. But to tell us that we can be photographed at night—that's putting it on too thick!"

To be photographed in the harsh sun was an ordeal suggesting a visit to the dentist. But the idea of going to have pictures made at night!—The intrepid photo pioneers wrestled with the problem of artificial illumination and solved it—but not painlessly.

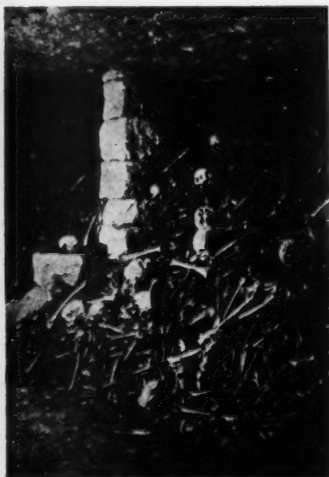
With everything from candlelight to chemicals cameramen have tried to work independently of the sun. Just about 80

years ago, in 1860, the famous chemist Bunsen, made a great discovery: the use of magnesium for lighting. A wire 10 mm. long (about $\frac{3}{8}$ inch) produced—according to his calculations—illumination equal to 64 candles. Magnesium, however, was extremely costly. A few years later, when Rutherford enlarged a small negative of the moon's surface by means of a magnesium flare, his bill reached lunar figures!

After these experiments, chemical manufacturers got busy and by 1870 they evolved a process which could produce magnesium for photographs at a low price. This opened an era of ghastly faces, closed eyes and paralyzed muscles. They were not to disappear until the modern flash bulb liberated the imprisoned faces and physiognomy of photographic subjects.

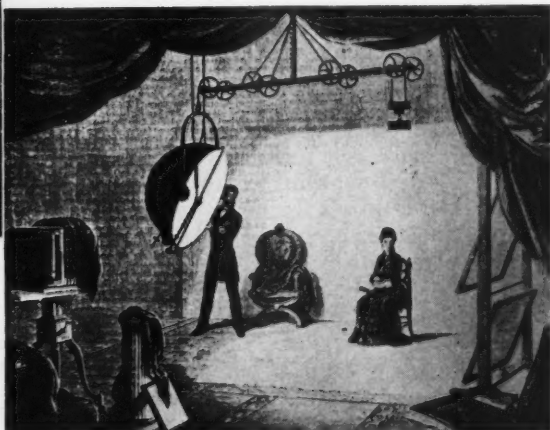
Before that recent date, however, electricity entered—and aided—the picture. A man known for his gallant exploration of the stratosphere, the aeronaut, photographer and bon vivant, Nadar, descend-

(Page 86, please)



● The first photograph taken by electric light. The famous French photographer Nadar took an electric arc down into the catacombs. The resultant picture of a heap of human skulls and bones was a sensation. N. Y. Museum of Modern Art.

● The first lighting reflector was a giant affair nearly five feet in diameter. A steam engine furnished its power.





● Being on the scene when an accident occurs is only part of the job. How would you cover a tragedy like this? What pictures would you take for (a) a daily newspaper, (b) a magazine, (c) an accident prevention society, (d) for a law court?

How to Cover Accidents

Doing it the professional way means anticipating and planning the photographs to meet all possible legal and editorial requirements while on the scene.

By H. D. ROBARDS

MUCH has been said about the possibilities for the amateur camera fan to make money out of pictures for illustrating the scene of motor car accidents. But perhaps not enough has been said on the subject of being THOROUGH in that work. Indeed, thoroughness may have been left up to the professional photographer. And the more experienced the professional, the more thorough he is in preparing his illustrations.

Let's consider the case of a recent serious accident—from the viewpoint of the commercial photographer who illustrated it for an insurance company's case in

court. This accident involved only two cars. It happened on a straight road, between the guard barriers of a bridge—and it was certainly a bridge wide enough to have allowed the cars to go on their way safely.

When the commercial photographer was called by the insurance company, he made some inquiries of the man who called him before he started assembling his camera, tripod, film and sky filters.

When he arrived at the accident scene, his first step was not to start shooting pictures. Instead, he walked over the entire

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Being CRITICAL

Your Snapshots and How to Improve Them

THE picture "BABS" has two striking faults: the obviously uncomfortable pose on a bench-back, and the girl's head being placed against the edge of the cloud. The latter could have been remedied by moving her a little to her right; but the first might be harder to make seem natural. Were she sitting on something comfortable, which would give a satisfying reason for her being there, the shot would be much better. A picture must please the mind as well as the eye.

The bottom of the shot is well handled, if she must sit on the back of a bench. The dark areas run in pleasing lines and the showing of the left end of the bench keeps this



● "BABS." Leica, Du-Pont XL Pan, red filter, 1/60th at f6.3.

line from leading out of the picture.

Beware of red filters where the main interest is the human face or figure. The strong contrast which results is difficult to print, and the reds of cheeks and lips come too light. Red filters are good for dramatic effects, but sometimes yield unnatural ones.

"TEA PARTY" shows possibilities of the candid camera at its best. A posed picture would not have caught the spontaneous expressions, nor given as pleasing and natural



● "TEA PARTY." Perflex camera, Superpan film, 1/50th at f11.

a glimpse of the children at play. We wonder just what the youngster at the left is "telling them."

A "candid" picture is one taken without the knowledge of the people in it. Any camera, regardless of size, is "candid" when it "steals" a shot; a miniature camera is "candid" only when it is so used.

The difficulties in taking unposed pictures show here, though the grouping and interest are good. The dark open doorway would have been avoided and more of the two hidden faces would have been shown, had the maker been able to select the background and pose the subjects. The inclusion of the doll carriage at the right indicates an obvious pause in more active play, and thereby greatly increases the picture's story-telling power.



"TONY," like most dogs, did not enjoy posing and was difficult to photograph. The light was poor, making it nec-

● "TONY." Precisa 1 1/4 x 2 1/4, 1/50th at f2.9.

(Page 78, please)

● Lights! Camera! Action! It's Hollywood, all right, the land of make believe, where the actors can go so far as to pretend they're in a movie. The occasion is a screen test. The school director may be seen in the center of the picture (right) instructing a couple of neophytes.

● A test costs the studio \$500 or more, and "another chance" is a forgotten language. Miss Deering (below) was being paid \$40 a week to attend the studio drama school when she took the screen test described here.

By PHILIP H. BAILEY

Illustrations by 20th Century Fox



Anger! Pleasure! Jealousy! Hate!—the entire gamut of human emotion is run off—and it had better be good!

Let's Watch A Screen Test

CAUTIOUSLY, we open the heavy door of the sound stage and tip-toe to a far corner of the set. The test, luckily, has not yet started. Prop men are putting things in position and the gaffer (chief electrician) is arranging the spots along overhead catwalks.

The cinematographers are loading their sound camera. An assistant soundman is adjusting the spot where the first scene will be taken. Everything is being made ready for a screen test that will decide

a girl's future—at least for a while. Tests cost a studio between \$500 and \$1,000. You seldom get invited for a retake.

Busily directing the whole proceedings is Florence Enright, the director of the 20th Century-Fox drama school. Miss Enright used to be an actress before she began teaching dramatics at Universal. She made so good there as a star-maker that 20th Century-Fox hired her at a boosted salary to train coming stars.

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Budgets for Santa

Accessories, acquired in groups, serve the cause of economy, avoid duplication and increase the fun of picture taking.

By RALPH HABURTON

Illustrated by the Author

NOW is the time to rally to the cause of better pictures with new equipment and accessories. All camera owners are taking stock of their needs for the coming year. Excellent suggestions may be found in the advertising columns. In addition, the shopping lists below and approximate price ranges are furnished for the convenience of wives, friends, parents—and for the photographer, knowing exactly what he wants, to play Santa to himself. Check your needs now with the suggestions below for a starting point.

<i>For picture taking:</i>	<i>Approximate Price Range</i>	
Exposure meter	\$ 1.75	\$22.50
Tripod	2.25	10.00
Combination lens shade and filter holder .....	.75	3.50
Filters—yellow, green, red	2.00	8.00
Tilting top	1.00	3.50
Supplementary lenses	1.50	5.00
Flash synchronizer	5.00	25.00
Range finder	4.75	6.00
Lights and reflectors	1.50	15.00
Photography books .....	.50	10.00

<i>For making enlargements:</i>		
Enlarger	10.00	75.00
Easel	4.00	7.50
Safelight	1.50	3.50
Paper developer .....	.25	1.00
Hypo .....	.25	.50
3 trays	2.25	3.75
Graduate .....	.25	1.00
Focusing aids	1.00	2.00
Print Tongs .....	.25	.50
Squeegee .....	.25	1.50
Ferrotypes tins .....	.75	2.00
Funnel .....	.10	.50
Printing Exposure meter	2.95	15.00
Print press	1.50	3.50
Trimming board	1.50	3.00
Paper .....	.75	3.00



● For the man who already does his own processing, these darkroom aids will increase the efficiency of his print making these winter months.



● A complete darkroom for making prints and enlargements, should include these items (right).



● Picture-taking accessories mean better pictures. Check those you have and those you need.

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WHEN selecting your exposure meter, be sure that it is sensitive, sharply directional, and accurate. These are three exposure-meter essentials that assure better pictures and mean savings in film. You can check these features in the G-E exposure meter.

Remove the hood in very dim light. Note the readable indication—that's sensitivity. It will mean much in the pictures you take.

The hood on the G-E meter excludes stray light—admits only the light from the scene. Check this by noting the sharp cutoff indicated by the needle movement as you turn the meter from dim to bright light—that's the sharp directional effect. It's another reason why you get the *correct* camera setting. Compare two of the meters under the same light. They'll read alike—that's accuracy, a quality that assures better pictures.

Remember, too, that the G-E meter can be used to determine the correct time for printing and enlarging. Consider these features when you make your selection. You get them *all* in the G-E exposure meter. See one today. General Electric, Schenectady, N. Y.

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Film Clips10	.40
Viscose sponges50	1.50
Timing clock	2.00	10.00
Negative files	3.50	10.00

Also desirable are the following darkroom aids:

Scales	4.00	.....
Siphon	5.00	.....
Foot switch	1.95	.....
Print dryer	4.50	10.00

For still projection:

Projector	15.00	35.00
Slide mounting kit	1.50	.....
Projection screen	2.50	12.00

For motion pictures:

Splicer	3.75	20.00
Titling letter outfit	5.25	10.00
Screen	2.50	20.00

Let's Watch a Screen Test

(Continued from page 67)

Prospective stars discovered by talent scouts are hustled into Miss Enright's school at the studio. Then follows a course of training during which they are known as stock players. They receive about forty dollars a week for going to school and breathlessly awaiting the verdict of Miss Enright who is the sole judge as to when a "student" is ready to take the tell-tale screen test.

Miracles have been worked with some of the newcomers. Few beginners know how to walk correctly. The school director corrects this with exercises and walking while balancing a book on the head. One girl got rid of a double chin by following the prescribed tongue exercises.

Eyes often need training. One actress had the habit of blinking every time she was on a set. Miss Enright corrected this with a series of eye exercises to help her withstand the glare of the lights. Some critics claim the eyes are the most effective acting feature on the screen. All the stars have expressive eyes and do a lot of acting with them.

If you have an 8 mm. or 16 mm. camera you already may be giving your family and actor friends a film test as described in MINICAM (page 99) for November. It is a good idea to furnish some dramatic instruction as does Miss Enright. It saves a lot of film footage.

At the movies, watch how players use their eyes to express various emotions. Try to get your prospective "star" to act for a closeup in a similar manner.

Interrupting our reflections, a beautiful golden-haired blonde comes on the set. She is Dorothy Deering, the girl to be screen tested. She wears a long, low-necked evening gown. This appears incongruous to us as we have just eaten breakfast. Her face is covered with the usual "panchromatic" brownish grease paint, but no other makeup.

For months Dorothy has been under contract as a stock girl at Fox. She played bits in "Alexander's Ragtime Band," "Hold That Co-Ed," and other films, so is not entirely inexperienced. To see if she was ready to step into a featured role, school-director Enright ordered the test.

"Couldn't sleep a wink last night," Miss Deering confides. But everyone worries over the test.

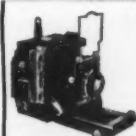
Another stock player, George Parrish, is participating. He isn't being tested at this time, however. Suddenly a hush falls over the room. The test starts with a long shot of the two players standing at a tiny cocktail bar at one end of a fancy living room set. Then the camera moves up closer until the big viewfinder frames the players from the waist up.

Before each shot, Cameraman Andriot goes out in front of the camera and takes a reading with a Weston exposure meter. Before the camera begins to silently spin, the school director takes a peep through the view finder to see that her players are lined up as she wants them.

We sit very silently on a box in a dark corner behind the camera. A draft from the air cooling system nearly causes a



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by Harold M. Lambert



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sneeze. It would have ruined a scene.

The third shot is a closeup of Dorothy talking. To complete the test, the cameramen make a pan shot of her walking across the room. At the door, she hesitates, expresses anger, opens the door, rushes out and slams the door behind her. The soundproof walls are still vibrating as one of the assistant cameramen begins unloading the film magazine to rush it to the "lab" for developing.

In each scene of the brief play, Miss Deering enacted emotions such as happiness, passion, sadness and anger. Each scene was carefully rehearsed before shooting. Two takes were made of each scene. They ranged in film footage from 60 to 150 feet each. Only one take of each scene, however, which the school director will decide, will be printed.

When the test was over, Stillman Jack Woods came along with his Speed Graphic and took a couple stills for us. As is customary with exclusive shots, he gave us the negatives.

Early the next morning Miss Enright cut and edited the test. A few days later Darryl Zanuck, the studio's famous boss, viewed the film in his private projection room, decided Dorothy was great and signed her to an acting contract. She'll be given a leading part in film one of these days, and maybe a new star will be shining in Hollywood—as the result of a brief screen test.



● I use it instead of intelligence tests, to see how bright they are!

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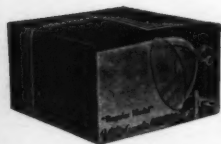
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How to Cover Accidents

(Continued from page 65)

scene, studying all angles from the place where the two cars collided to the places where each landed after their giddy spins. In order to illustrate the scene AFTER the wreck, he wanted to visualize as well as possible just what had happened in the brief action seconds when the two cars were gyrating wildly before the sickening finale!

Then he began planning and taking pictures. First came a close-up of the bridge rail, showing the series of scratches made by the car which had struck the sturdy concrete barrier. And that shot, like all others, was made with the lens stopped down to bring out the most detail possible. Next came two shots of skid marks on the concrete highway, showing the paths taken by the two cars as their drivers fought for control over them. These were taken from as close a viewpoint as possible, and yet show the complete skid marks.

Then he made a shot of the car which had suffered the lesser injury—in the wide, shallow ditch in which it had come to a stop. This shot was not too close; it showed the ditch in relation to the road; yet it was from a close enough point to show the full damage done to the left side of the car. Another shot was made to show the right side of the car—and the damages it sustained by striking the bridge barrier several times.

The condition of the car which had been badly damaged was shown by several pictures. The car had caromed off the highway, plowed through dense underbrush and stopped short by a big tree. The photographer went to work pulling brush out of the way from three angles so that he could picture clearly the front of the car against the tree and each side of the car. That was three shots of the car against the tree; another was taken, a front view, after the car had been pulled back to the highway. The close-up showed the damage in detail.

In making his pictures, the photogra-

pher did not walk through the path cut in the underbrush by the wrecked car. Instead of that, he photographed that path, showing the car's course clearly.

That made a total of ten negatives taken to picture the accident scene. Each shot was made with only one thought—to bring out as much detail as possible, so that questions which might be asked by a jury were answered by the pictures which were made of the scene long before the jury might be called to judge the case.

Because he knew the habits of attorneys, judges and juries from experience, he MEASURED the distance from his camera to the subject on each exposure.

Nearly anyone would believe that the photographer had done his job by that time—that he had made an accurate picture record of the accident scene. But not this commercial photographer. His experience in telling juries of photographing other accident scenes demanded that he make a rough map, on which were marked the bridge the tree, the skid marks, the resting places of the cars after the crash, and also the fact that it was a straight road. Then he began making more measurements. He measured the length of the skid marks, their distances from the center and from each edge of the road. He measured the width of the roadway and the distance from the edges to the center stripe. He measured the distances from the point of impact to the points at which the cars began skidding, and also the length of the distance traveled by each car from point of impact to stopping place. He put down those distances on his rough paper map, including the distance from the edge of the road to the big tree, and also marked the fact that one side of the bridge barrier was longer than the other. Then HE figured that he had a complete set of illustrations of the accident scene.

There was one basic reason for the number of pictures taken and the map's having been made. The photographer knew that one or more years, not just months, might elapse before the courts were

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through with settling the blame for perhaps serious injuries sustained. Therefore, his experience told him to have the complete story in pictures and on paper, so that when the time came for him to tell a jury about making those pictures he would not have occasion to say "about" or "I guess".

The commercial reason behind that was this: He knew that if he illustrated the scene completely he could charge for illustrating it—and would not have to be satisfied with just billing them for negatives and prints. He also knew that, if his presence were required on the witness stand, his work would justify another bill for a day's time—and not just a meager witness fee.

His composition for these pictures was wholly factual and the photographic technique involved on the job was his everyday technique: To know as much as possible about the scene before he started to work; to PICTURE everything possible in as much detail as a camera will gather; to TAKE ALONG enough equipment to meet any possible conditions. He had along flash equipment just in case he did not get through till after dark. He doesn't use a synchronizer because he always stops down for detail to the extent that he can use "open" flash, even when shooting interiors in daylight and against big windows.

The photographic work involved here was not impossible of attainment for a good snapshot fan. But the THOROUGHNESS shown in his method of work is one reason why he frequently goes out from his home town into much larger cities to make a successful series of magazine illustrations.



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FREE
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Babes in the Studio

(Continued from page 63)

by keeping the baby's attention on some stunt or object. There are, of course, aggravating and thoroughly unexplainable moments when the baby will decide suddenly not to respond, and all action ceases until the child feels like resuming the fun.

This matter of responsiveness is the major consideration in selecting babies for the commercial camera. It is not the pretty baby who makes the most desirable model, but the most animated one. The baby with quick, interested responsiveness to toys and other things put before it will make picture after picture for the photographer to catch. If the baby is also a pretty child, so much the better, but primarily it must have that eager, reaching curiosity that makes a baby do interesting things. Having that, and sturdy health, of course, the baby will make the pictures, and it is entirely up to the photographer whether they are caught and recorded on his negatives.

A corner of the Roberts' property room suggests a day nursery. There are gaily colored cribs, chairs, miniature furniture and toys of all sorts. Rows upon rows of dolls and stuffed animals vie with each other to entertain and to call forth smiles and expressions from youngsters. Then there are caps, sweaters, mittens, tiny shirts and other garments—yes, even a supply of those well-known three-cornered pants. There are facilities for bathing baby, for preparing baby's food, a place for baby to nap. When the needed properties have been selected and assembled in the studio, one is reminded of a hospital or a nursery, rather than a photographic establishment.

The backgrounds used for baby pictures run from delicate pastel colors to jet black. These grounds are made of many fabrics, of water-color painted surfaces, paper, felt, etc.

The babies and the properties to be used are placed on a large, yet easily movable platform or stage which can be shifted by the assistants in the studio to secure any particular angle of light.

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Being Critical

(Continued from page 66)

essary to shoot at $f/2.9$, 1/50th second. Underexposure is evident by loss of detail in shadows and general lack of crispness, but an active pup requires an exposure no slower than 1/50th. The pose is not bad and very much like Tony. Using the lens wide open subdued, an otherwise distracting background by throwing it out of focus.

Several suggestions for making good pictures of pets suggest themselves from this one. Choose a bright day, particularly if the animal has dark fur, and expose fully to get all detail.

The person who is best obeyed and loved by the pet should be the photographer's only assistant. Use a large lens opening to soften background detail. Pictures of pets please their owners, and if well done are always interesting camera subjects.



● THE WINDMILL. Purma Special Camera, Super Sensitive Pan film, 1/50th at $f/11$.



● SKYLINE. Utilio Camera, Finopan film, deep yellow filter, 1/10th at $f/11$.

"SKYLINE" is the type of picture that demands considerable photographic skill,

for there is little interest in the subject matter. In this case, the clouds are well rendered, but they are background, and the foreground is uninteresting. The trees are not sufficiently alike to give a feeling of repetition, and they are too far apart to give unity. If a third tree could have been included to give progression in size, the result would have been better.

But probably the best solution would be to choose a viewpoint much farther to the left. This would show the bases of the two trees, make the trees appear closer together, and bring the low tree tops at the right more into the picture as a foundation for the composition. Also, inclusion of human figures or animals near the trees, as a natural part of the setting, would greatly increase the interest of the picture.

"THE WINDMILL" was photographed in the highlands of Barbados. Timing was especially fortunate; the cloud makes an excellent background and the arms of the mill are at an attractive angle. The framing in the picture area is good too, although slightly more space at the right would be even better. A little trimmed from the bottom, and selection of paper and exposure to make the clouds stronger, would increase the effectiveness.

As with any tall structure, avoid a too-near viewpoint; this requires a tilted camera and hence makes the building appear to fall over. A deep filter like a K-3, or red or orange, for subjects of this kind before a cloudy sky, makes for dramatic results. Don't shoot from squarely in front, but rather at an angle of thirty to forty-five degrees.

Industry's Photographer

(Continued from page 57)

Rittase is strongly in favor of low key subjects; rich in tone, deep, with good blacks. And for combination work, clear backgrounds—not utterly blank on the negative, but smooth, and much lighter in tone than the subject. Shoot against a cloudless sky, or arrange angles so that unnecessary detail will be avoided. Combination work is the linking of picture elements, and the original idea should be clear in the final result.

You may wonder in how many ways this one picture was used. Rittase picked up a phone and called for the card file on "X-801," the identification number of this print (Fig. 2). "Here, look this over."

Its ports of call included newspapers, insurance companies, house organs, year

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"They shouldn't—it's easy enough. And I don't care how they pronounce it as long as they spell it right on checks."

Picture Your Xmas

(Continued from page 17)

perative for the photographer to make a few trial shots before Christmas time comes around. With any camera, even a simple box, set the shutter on time and count to yourself. Work out a cadence in counting—perhaps like 1-2-3-4, as in march time. For the trial exposures, make three shots of each picture, doubling the amount of time given each exposure. Select the best one of these three negatives and when the time comes to make those special shots you will know exactly how to expose.

Follow this procedure with any camera. Using one of the high speed films with the lens set at *f*11 the usual count is 1-2-3-4. This is equivalent to about a 1-second exposure. Be sure the camera is on a firm support and is not jarred while pressing the shutter.

Flood light bulbs are special lamps resembling in appearance the usual home lighting units but they burn much more brightly. They last but two hours burning steadily but with a little care they can be made to last for a great many shots. Only turn them on during the time the picture is actually being made. If you have a *f*3.5 or faster lens you can make 1/25th-second snapshots with only one flood bulb.

Flash bulbs are very convenient but they are also more expensive because a

new bulb is used for each shot. But ONE good picture, however, is worth dozens of ordinary ones. Especially for occasions like Christmas snapping, the choice should be flash. One flash bulb permits taking a snapshot at any time of night or day with any camera.

Flash bulbs are supplied in different sizes and different types. For home use the smallest size is quite suitable. The shutter is set on time (T) or bulb (B). When everything is in readiness (1) press the shutter to open the lens, (2) flash the bulb, (3) close the shutter.

That's all there is to it. For this "open flash" work, as it is called, G. E. Photoflash bulbs are often recommended because they have the briefest flash time. If the room is fairly dark and no lights are shining into the camera, the film will "see" only the 1/50th second impression of the flash and this, being as rapid as a snapshot, will catch any slight motion.

Another advantage of the flash bulbs is that they permit using a small lens open-

Box cameras are marked in U. S. stops. But exposure calculators generally use the "f" system.

"f" stops	Box camera (U. S.) Numbers
f8	4
f11	8
f16	16
f22	32

ing. About f11 is used for the average shot. Consult the table furnished by the photo supply dealer who provides the bulbs.

The use of a flash synchronizer on the camera of course makes it even easier to take night snapshots. Then bulbs of the wire-filled type are likely to be recommended, such as the Wabashi Superflash bulbs, which are designed to furnish a long illumination "peak" permitting easy synchronization.

Generally, however, either the Wabashi Superflash or the G. E. Photoflash bulbs may be used with assurance of complete success in getting those unusual pictures

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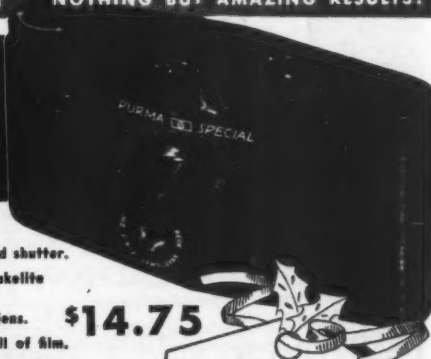
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The common practice in flashbulb and photoflood work is to use one bulb placed close to the camera. With the bulb in this position a flat front lighting is produced. Possibly this doesn't result in the finest quality but unless you have had some practice in interior work it is the best to employ. For improved modeling, hold the flash bulb about three feet above and to one side of the camera.

Keep your picture making simple at Christmas time. Other people want to enjoy the day and their presents. Place the camera on the tripod, set the shutter on "T". If the pictures are being made by flashbulb consult the exposure tables issued by the bulb manufacturers and stop down to the aperture which is stated for the film you are using. Now if you are ready to shoot open the shutter, ignite the bulb, and close the shutter. Wind up to the next exposure. That's all there is to it.

Now whatever you do, whatever equipment and whatever procedure you use—try it out *before* the Christmas shots are made. Only in that way can you be sure that your pictures will be a success. Make sure of everything. If you are a beginner and your prints don't look just right take them and the negatives to your local photograph dealer or consult an experienced friend.

Now instead of saying "Merry Christmas," we'll say "Happy Shooting" and may Santa Claus bring you that fine new equipment to make better pictures.

Gargoyles Alive

(Continued from page 21)

ture-shooting spree, burning silver nitrate from sheaves of celluloid, my ardor mounting as I worked.

As I reflected of the man with "eyes who sees not" I discovered, here where I had walked scores of times, mermaids scaly enough for Sinbad and begrimed architecture that made me long for the careful excesses of decorators of that earlier day. An ancient Atlas worn a bit by wind and rain and roughed by passing pigeons virtually hailed me to shoot some his way. Winged lions, perhaps masquerading as griffins, grinned in feline appreciation for portraits. Caryatides assumed more dignified roles, their robes folded around them in virgin grace. Inspiration, no longer fleeing, had wound its legs around my neck like the old man of the sea and was riding me a hard course.

Picture possibilities on upper floors beckoned my telephoto and I blessed the inclination that added it to my burden. Crossing the street from a particularly rich galaxy, I walked into the open door of what a sign in the window proclaimed to be a present-time boarding house, hoping to shoot from upper windows to overcome bad street angles. The hall was dark and ill-lighted, but I found an old-time spring bell which continued to clang dolorously after I jerked the cord.

Waiting for distant plodding footsteps which my ears heralded to bring their maker from the second-floor gloom, I looked around, my eyes adjusting to the dark. This boarding house, they revealed, must once have been a grand home indeed for its interior was rich in mahogany and so carved that women dusting in the past—it must have been long past, too—probably rocked on the edge of insanity daily as they explored with cleansing cloth the many crooks and crannies.

The maker of the dragging footsteps at last appeared, a heavy, dreary woman quite in keeping with the antiquity and deshabille of her household. When I asked permission to take pictures from her upstairs windows, she eyed me suspiciously



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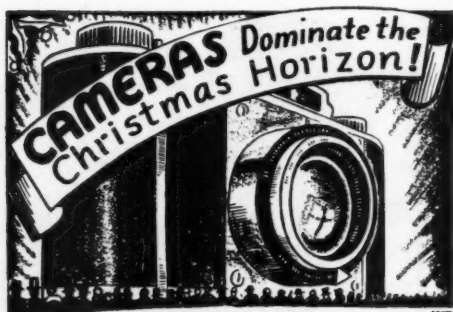
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and dragged me to the better light by the doorway for closer scrutiny. Apparently deciding that my face was honest, though simple, she agreed after I had explained my mission and she had bummed me for a cigarette.

Though I had won her grudging consent to operate my cameras in her house, my hostess seemed not to be without misgivings. She followed close at my heels as I manipulated shutters and lenses, at first trailing silently and pausing while I worked, with her face reflecting the obvious thought that I was slightly "touched in the head."

"Them things," she said finally, "have been there for years. What do you want to take pictures of them now for?" I explained that I thought they had a beauty of their own and that they would tell in pictures a story of their day. She sniffed.

But I had not yet touched the bottom of her estimation, for as we ascended to the roof I went into unthinking ecstasy over the picture possibilities of ancient chimney pots that were scattered in patterned promiscuity about the roof.

"Them dirty things," she said, and I mentally felt my feet touch the rock-bottom of her opinion. But I shot my pictures with zest, shedding her scorn as a duck is supposed to shed water.

By this time I felt that I had pictures enough, so I bade my friend good-bye, without regret on either side, and wandered again into the light of the street. But my shutter snapping was not quite over, for there, coming down the nearly deserted street, was a man pushing an old two-wheeled pushcart. Bringing the Graflex into play, I spotted him his place in pictures, taking care to include ample portions of the faded building fronts.

Though the street was free of passersby, it was lined with automobiles which belied the antiquity, and for a minute I toyed with the idea of asking my pushcart friend to come around Sunday when the cars would be gone, but my experience with the boarding house proprietor dissuaded me. A cameraman is used to having people think he is a little "touched in the head," but there is no use letting too many people



● This is the rotogravure layout which resulted from the author's picture-taking adventure.

get the idea at the same time—it might become contagious. So I called it a day, satisfied I had seen and snapped my duty.

But I learned that gargoyles, statues and other architectural decorations, indoors and out, are not photographically dead subjects. We may think so, as they have been pictured for so long on postcards and in history books, always appearing like lifeless lumps of wood or stone. To make them spring to life before the magic of your lens is not too easy. The chief problems are (1) framing, (2) lighting.

The first has to do with arranging the subject in the viewfinder. Shall the statue, bas-relief or gargoyle, be photographed in its entirety? Or will a part or section of its area be selected? From what angle shall the exposure be made?

The second problem, that of lighting, is closely related to the first. As the photographer walks around a subject, he watches not only the general composition in his viewfinder, but also pays close attention to

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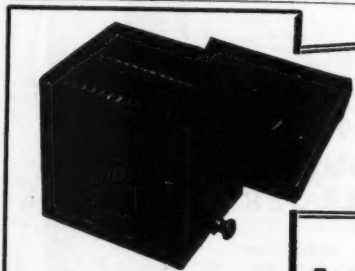
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the arrangements of the light and dark areas.

To start with, take a position where the light comes from the side. The part of the subject nearest the camera, by natural perspective, will appear the largest. Therefore, select the most important or characteristic detail of the composition and keep this detail toward the foreground.

For background, look for neutral whites, grays or blacks. Sky, clouds and water make effective backgrounds for any subject.

Although your subject does not move, the sun does. Watch the effect of the shifting rays, and you can work magic with a piece of stone that has not stirred for a thousand years. Friends will look at your print, and "by the magic box," they will say, "It's alive!"

The Camera Turns Back

(Continued from page 64)

ed deep into the catacombs of Paris. Equipped with an electric arc, he travelled through this gruesome storehouse of skeletons, and took one dramatic, touching picture. Most important, however, is its claim as a photographic first: the first candid shot of Parisian underworld by artificial light!

Artificial light made its entry to the

studios through a quaint device, almost as monumental as a modern power plant. Mr. Wilde of London established in his studio a "magnetic lightening machine" operated with a private steam engine at the modest sum of about \$1500. With this momentous set-up—costly and troublesome—Saxon & Co. in London boasted of taking 20 portraits in one evening!

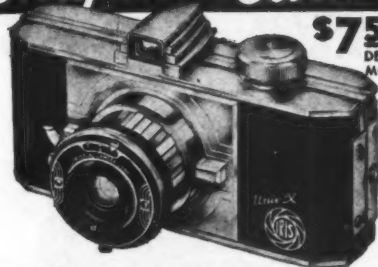
But it was not until Paris picked up the vogue that night photography really got going. It started when one Parisian photographer dared to put out a gas-illuminated placard "full of startling absurdity" announcing that "dull weather is the best." The professional brothers laughed loud and long. "Absurd!" . . . "Impossible!" . . . so ran the comments. To do photography, one had to be at the mercy of the sun.

But one hadn't—as the World Exposition of 1878 proved. Here, Mr. Liebert offered his beguiling invitation "Let me take your picture electrically!" "Faire la photographie à l'électricité"—the French version—became a popular song. Mr. Liebert could not only take pictures; he could make flattering portraits. He created mellow, diffused lights by placing an arc lamp in a large reflector suspended by a system of pulleys. A Gramme machine driven by a five-horse power engine made Mr. Liebert the Sun King of the photographic craft—by day and, especially by night.



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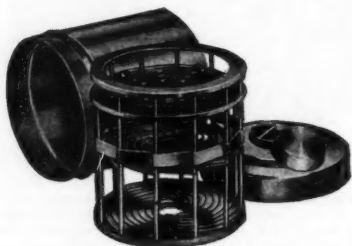
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Snow and Rain, a la Carte

(Continued from page 45)

the process employed, except that paint instead of water is spattered by the brush.

The brush is charged by rubbing through white paint spread on a card. Hold the brush firmly and spatter with the thumb about 6 inches from the glass.

Vary this distance to obtain dots of varying size and continue until the entire glass is evenly spattered. Work with the sheet of black paper under the glass. This facilitates viewing the work as it progresses.

The paint-spattered glass, as a printing screen, may be used over again many times. It is simply laid on the enlarging paper before the print is exposed.

The correct exposure for a print is determined in the usual manner and then the screen is placed on the sensitive paper *paint side up*, and the exposure made.

No increase in exposure time is necessary and any dodging that is desired can be done just as if no screen were present.

By using the screen with the paint side up, the dots are diffused in proportion to the thickness of the glass, thus producing a natural effect. If the painted side of the screen faces the paper emulsion, or if the screen is made on thin glass or celluloid, not much diffusion is obtained and the snow and rain drops appear to have been spattered directly on the print.

An important factor to take into account is the scale of the spatter. An 8x10 print should have a larger size spatter than a 5x7. A trial print with a screen will soon prove this. The relative size of the objects in the photograph to be treated should also be taken into account.

To make a rain screen, use the artists' bristle brush. Charge the brush by dipping into the paint. Drain the surplus on the side of the container until the brush is about dry. Next, simply make short lines of different lengths and widths, staggering them diagonally across the glass. Draw the brush from left to right and drag with an upward stroke. When the glass is covered, permit the paint to

dry. Next, with a dry rag do some judicious rubbing out of some lines, thinning down of others and, perhaps, just shortening some lines until a natural-looking rain spatter is obtained.

As in the case of the snow screen see that the rain scale conforms to the size of print and objects in the print. The aerial perspective in this case will take the form of thin short lines for distance, increasing in length and width for middle distance and foreground.

The sheet of black paper under the glass helps view a screen as it is painted. The ultimate test, however, is "how does it print?" If results lack a spontaneous, normal flavor, simply wash the paint off and remake the screen.

The snow screen is the easiest. With the rain-screen, as an additional aid, diagonal pencil lines may be ruled on white paper or with white chalk on black paper. Place under the glass as a guide for the painting.

Yet more accurate is the use of an exact-size print under the glass. Then spatter or sketch on the glass. This method gives a visual picture of the final result. It also enables the greatest degree of control as to scale and perspective and avoidance of obscuring essential detail.

The street scene shown was taken from a Fifth Avenue bus. It was snowing at the time and snow can be seen in the

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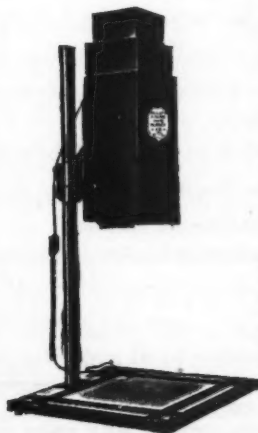
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middle distance. The picture is a natural for the snow treatment. Also for the rain treatment because of the foreground figure, carrying an umbrella. In either case the artificial snow or rain heightens the picture's effect.

The Broadway night scene was taken on a clear November night. It, too, lends itself to either rain or snow treatment. Without the screen effect the picture is "just another shot."

Study the tone values of the screen effects of these illustrations and you will observe that there is a noticeable graying in the Broadway scene as opposed to the Fifth Avenue picture. This is as it should be. Whites appear darker at night. This darker value falls into proper tone scale quite naturally in printing. No additional control is necessary.

Assuming that you have neither type of negative, what to do? Most any negative taken on a fairly dull day may be used. And if you insist on using a print with strong contrasts, lessen the contrast

by using a softer grade of paper, or the usual method of over-exposing and under developing the paper, using diluted or exhausted developer.

Make a straight print of the desired size, place under glass, spatter the glass until the desired rain or snow effect is obtained and then make a new print using the glass screen.

The making of the screens is under complete control. Anything from a slight flurry to a snow storm can be created or a drizzling rain to a cloud burst. Above all, however, strive for natural effects.

Watch that Foreground

(Continued from page 31)

compose so well as one with a second, smaller arch; while a third curved opening may bring the composition to perfection if an extremely wide-angle lens is used. In Fig. 1, a shorter than normal focal length lens obtained the wide-angle view.

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worth's, Fig. 9, with very striking foreground, is taken from under the elevated. Although quite impressive, the railway structure and the surrounding buildings do not compete with the towering center of attraction.

As a rule, foreground obstructions such as a fence, a stone wall, or a straight line across the lower part of the photograph give a feeling that entrance is forbidden. But the pattern type is entirely different, for it leaves no such forbidding feeling in spite of the maze of cables, branches, vistas or other oddly arranged elements. Such features are a boon to the pictorialist if he will but take advantage of them. They are even finishing touches around the main subject that lift the commonplace out of the rut of monotony. Thus a variety is possible, and, just as "variety is the spice of life," so is a proper foreground often the making of pictorial quality.

Glamour Comes Home

(Continued from page 43)

Because glamour photography is a highly specialized art, we amateur photographers shooting amateur models don't seem to produce quite as good results as the professionals. However, the Hollywood still men have developed one type of glamour photography that you can profitably add to your repertoire . . . and that is *floor shots!* The chances are about even that the unusual Hollywood picture that you have in your notebook was taken with the model lying on the floor. Don't get the idea that this is just a novelty . . . it is a special type of portraiture, which has amazing possibilities for flattery or distortion.

It is well adapted for beginners because of its reduction of technical problems. You have no background to consider and only one light. You don't have to climb on top of doors or hide under tables to get that unusual camera angle; the model can be arranged as easily as a still life; she can hold a pose almost indefinitely without effort and without tremor; you will have little trouble in getting her relaxed; and if your model is relaxed the

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"empathy" (see Mortensen) is likely to be swell!

One preliminary warning . . . floor portraiture should usually be reserved for young women and girls. Its distinctive quality is the relaxation and passivity of the model, and these are definitely *feminine* characteristics. So don't use this method for portraits of men. They won't like the results anyway.

There are several reasons why floor shots are a good way to begin a sitting. In the first place Mortensen advises starting off with some definite action "even if it is no more than moving your front lighting unit two inches to the right." Well, a more definite action than commanding your subject to lie down would be hard to find. Just throw a light-colored blanket on the carpet, and ask her to lie down and relax. If she has blonde hair you may prefer to cover the blanket with a black velvet.

Study facial angles by moving a light slowly about and watching the change of shadow patterns. A spotlight or a lamp

without a reflector will give sharp-edged shadows which tell more about the planes and bony structure of the face than any amount of ordinary study.

After the first general analysis, I use a detachable view finder which is handier and lighter than the camera to hunt angles and compositions. When I find something, I bring the camera into action, perfect the composition and lighting, calculate exposure and focus, check the whole set-up, and make the shot.

Selecting the camera angle—that is where the distortion of foreshortening provides the most exaggerated flattery. By shooting from above you can make the Fat Lady look like a sylph—or vice versa. To learn the general effects make a series of shots showing considerable foreshortening, one from each direction of a face. Use an angle about 45 degrees above the ground.

The most common problem is making the face appear more slender. A slight amount of heaviness about the lower jaw disappears when the model is lying down.



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The folds of the skin are pulled by gravity back toward the ears instead of down toward the throat.

A camera position above the eye level gives attractive facial proportions, and a three-quarter view which shows the concave line of the cheek running from chin to cheek-bone cuts flesh right off the face. For yet more reduction, move the light until the near corner of the jaw is in shadow; this will narrow the face to almost unrecognizable proportions.

For maximum simplicity, the hands and arms are kept out of the picture and the eyes closed. This allows concentration on the plastic values of the facial features.

If makeup is desired, it is necessary to use only Panchromatic greasepaint and powder for improved skin texture.

Floor shots are head and hair compositions and if the latter is long, new fields for arrangement are opened up. Hair that is a trial and tribulation in ordinary compositions, becomes a live and vital factor when it can be moved about and lighted in various ways.

Woman's crowning glory then comes into its own and plain features take on the glamour of Hollywood Cinderellas.

Getting Better Pictures

(Continued from page 34)

attachments, the accompanying instructions give the correct camera distances and the area covered by the lens at each distance.

With a portrait attachment the viewfinder will show less than the actual area being covered by the lens and the angle of view as seen through the finder will be different than the area covered by the negative. This is caused by parallax. To become thoroughly familiar with this effect, try the experiment of opening the back of the camera and placing a ground glass on the film track. Cover the subject through the viewfinder and then notice that it is necessary to tilt the top of the camera toward you slightly in order to cover the subject in the same way in the ground glass. Mentally note the angle differences in camera position during this

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experiment so that you can set your camera properly for closeup work thereafter.

In making portraits let the subject be placed mostly in one plane, so fore-shortening will not distort the portion of the subject closest to the camera, making it appear larger and out of proportion with the rest of the picture.

The subject should be well removed from the background, so that the latter will be out of focus unless there is some special reason for including background detail. In order to decrease the depth of field as much as possible, so that only the desired subject is in sharp focus, use the lens fairly wide open.

For a pleasing rendition of the human face, the camera should be fairly far away from the sitter. For closeups, 3 to 5 feet is a good distance. For a waist high portrait and for a full length shot, 10 to 13 feet, depending on whether more than one person is included, or the size of the object. Focus on the sitter's eyes.

Study the composition carefully, working close enough to the subject so that the picture desired just about fills the negative. Make due allowances for additional space to take care of parallax.

A tripod or other firm camera rest is necessary for good portraiture and in order to use dramatic types of lighting a lens shade is essential. Good results may be obtained with the simplest of lighting equipment. In fact, some of the best salon prints are made with a single light in a reflector. Generally speaking, however, two light sources are preferable since this not only increases the illumination, making shorter exposures possible but also permits more flexibility in the pose and lighting.

It is essential in successful miniature photography that negatives be given careful fine grain development. This is just as important as any other phase of your picture taking. If you do your own film processing, use a quality fine grain developer and follow the manufacturer's instructions or have your work done by a recognized expert. Good developing is the finishing touch to assure getting better pictures with your minicam.

Pictorialist vs. Purist

(Continued from page 51)

paratively long lens (7" on a $3\frac{1}{4} \times 4\frac{1}{4}$ negative) it does not compose to the very edge.

Perhaps the Purist would have pulled a two-foot lens from his pocket. But by then, Pedro would have lost his spontaneity.

It was sunny September—6:30 a. m., and Pedro had just kicked aside his blankets. Looking across the little river town from his couch in the vacant lot, he saw me watching an ancient Chinese poking around the town's refuse cans. So he slapped on his hat, thereby completely dressing, and came over to borrow a match. The night dew had dampened his own.

We smoked and talked. Tomato picking was backbreaking work in the hot delta fields, said Pedro, but last night's beer bust was a wow. We laughed. And the level light bouncing from his face, the dancing eyes and crookedly amiable smile, shouted "picture."

The building sheathed with corrugated iron was a poor background. But to move him might have destroyed his delightful spontaneity. So watching that no shadowy blobs of window would grow out of cheek, nose or eye, I shot.

Although the Purist would have gloated over the leathery skin texture, he possibly would have likewise gloated over the distracting black blobs and lines in the background. And gloating, called the thing a picture as it was.

But pictorially, there is too much extraneous material, material that in no way contributes to the picture. So it was cropped with an eye for composition. Though, by chance, the Purist had visualized the composition, certainly he would have left the background "as is." "Pure truth" the background would have been, though not as sharp as he preferred.

Pictorially, however, that background is all wrong. It pulls attention away from Pedro. And after all, he is the picture. So, to emphasize the strong lights on his

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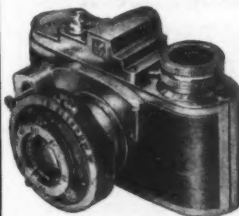
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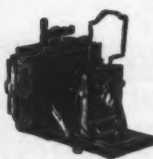
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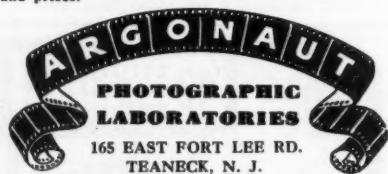
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face, this space was darkened. At this, the Purist shudders.

Megilp, which is a clear, amber, semi-liquid substance, was first well rubbed over all the print. Megilp can be had from any artist's supply house for 25 cents the tube.

Then the print was gone over with cotton, time after time, until not one trace remained. Next the softest pencil obtainable from "5 and 10" was powdered with an old file. A bit of cotton tipped with megilp was well worked into the pencil's graphite until smooth and apparently dry.

This was then applied heavily and with a circular motion to the white areas about Pedro. Because the left shoulder was not turned sufficiently to afford a good, solid support for the head, the shadow was worked in with a heavier application.

Using clean cotton, again in a circular motion, the results were smoothed and lightened in tone. Because the ear and hair about it were light and might vie with the highlights about the eyes, they were slightly darkened. Spotting with pencil was then done and in 24 hours, it was dry. The whole job took less than 30 minutes.

"Chan," contrasted with "Pedro," is an equally interesting face. But he lacks the strong composition.

Note how brilliant the highlights are after toning down the light area about Pedro. Note the swing from his shoulder, along the cheek and through the sweeping curve of his hat. Note the eye on the dominant third, the strong diagonals of the collar and the shadow's edge. Chan lacks these and is less forceful.

The best proof of photographic quality by this method is that an internationally known Purist judged a showing in which Pedro was entered. The judge exclaimed over Pedro, gave him first award and eulogized him as the best character study seen in Lo, these many moons!

Trains

(Continued from page 53)

As maximum definition and depth of focus is desired, many railroad fans tend to belong to the "f64" school of photog-

raphy. Whenever possible, the smallest camera diaphragm opening is used. As this necessitates exposures of one or two seconds for most views, a tripod is an important accessory. The only other accessory needed is a cable release. A yellow filter may be used on bright sunny days; it relieves and renders more detail in the shadows. Dull or cloudy days are favored by many because of the absence of hard shadows.

Trains being black in color, they require twice normal exposure. An average exposure for a train subject is one second at $f45$ on Plenachrome film in summer sunlight. On cloudy days one stop larger ($f32$) is used.

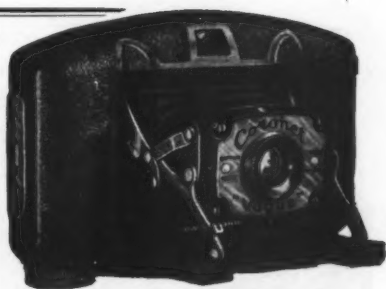
Because of the small stops used in railroad photography, any camera with an anastigmat lens will give good results. With the aid of modern minicams it is not even necessary to carry a tripod. Needle-sharp definition, for example, can be obtained if the camera is held steady with an exposure of $1/25$ second at $f11$, using ortho film such as Agfa Plenachrome, Eastman Verichrome, Gevaert Express Super Chrome and Perutz Per-senso. This also applies in the use of film like Finopan and Panatomic.

Pan film, however, is not required for locomotive pictures as there is no color in the subject and greater contrast is obtained with ortho films.

The photography of moving trains is an entirely different matter. A shutter speed of $1/100$ second or faster is required and this means a lens opening of about $f5.6$ or greater. In this type of shot some distortion is inevitable because the camera angle is from the front of the train and perspective causes the engine to loom large in front.

Moving trains should be photographed at an angle of about 45 degrees from the track. If it is moving about 60 m.p.h., a shutter speed of $1/200$ second is used. Get the entire train from locomotive to caboose into the picture.

With little practice a fine collection of pictures can be obtained showing the iron horse at its best.



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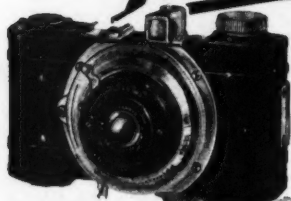
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The picture was one of a series made for the White Owl cigar advertising campaign. A print 11x14 inches in size was made (which was dye-toned) and the enormous reproduction made from this print.

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For Better Negatives

Absolute control of gamma and density characteristics, plus proven finer grain, explain the amazingly better results that thousands of amateurs and advanced camera pictorialists are achieving with GAMMA 'D'—the new-principle developer first evolved for William Mortensen, now available everywhere.

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Atomic Fine Grain Developer, \$2.15; Fixing Solution, 75c; Hardening Solution, 60c; Universal Developer (larger negatives and paper), \$1.50.

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The
"BEST"
Model 202
PROJECTOR

for Kodachrome, Contax, Bantam Special, Argus and all 35mm. film in standard 2"x2" glass or metal slides. Projects a beautiful picture up to 4'x6' at a distance of 25'. Ideal for commercial or home use. The product of a company with 16 years' light projection experience.

Heat absorbing glass mounted in condenser chamber permits only a minimum of heat to reach the slide, thus preventing damage to valuable film.

The four-point base remains solidly on the table at all times. Raising and lowering is done by means of intermediate legs.

Measures 4"x8"x12". Weight, 6 pounds.

The "Best" alone gives you all the features you want at such a low price.

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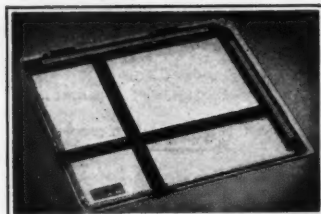
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Many enlargement defects are due to a faulty enlarging easel. It is wise to pay a little more and get the best easel available — the "Studio" easel, of course. Made of heavy steel, it is precise to the tiniest degree. Absolutely flat, white surface. Two-way adjustable margins. Bottom covered with heavy cloth. Standard size, 11x14 inches. Certainly, the "Studio" costs more . . . but would you trust a drugstore to develop your negatives? . . . why trust your enlargements with anything else but the "Studio"?

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Guaranteed. Ask your photo supply dealer for it or order it direct from
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Color photos wanted for reproduction.
Must have scenic value and general appeal.
Rural and pastoral views, wooded lanes, fields or orchards in bloom, old wells or water wheels, landscapes, gardens, etc.

IMMEDIATE ACTION RECOMMENDED!

\$5 We will pay cash for all work accepted—\$5. to \$10.—and even more for exceptionally suitable studies. **\$10**

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Chicago, Illinois

COLOR SLIDES—FILM—PRINTS

1" x 1" Transparency Mounts

TWO new types of projection slides will be welcomed by users of the Robot, Tenax and other cameras of 1-inch square negative size.

One of the new mounts is of glass and metal, and can be quickly taken apart for insertion or exchange of transparencies. The metal frames lock together without mess or possible damage to the film. These mounts are packed in lots of 25, in a good-looking carton which may be used for storing the slides after they have been filled.

The second type is a permanent mount consisting of two heavy cardboard frames, gummed on the inside, which hold the glass and film securely between them. Slight moistening of one frame seals the two frames together, providing dustfree protection. The cardboard acts as a shock-absorber in case of accidental dropping.

New paper masks for 1-inch square film are also available, packed 144 to the box. These masks have a gummed inner surface, and hold the transparency firmly against the glass when applied.

More information about these three slide-mounting aids may be obtained from International Marketing Corporation, 8 West 40th Street, New York.

Zeiss Tenax

ZEISS announces a new miniature camera, the Tenax, for all-round photography, but also capable of taking successive pictures at high speed; and also a fine precision 8 mm. motion picture camera, the Movikon 8.

The Tenax uses standard 35 mm. film in daylight-loading spools or cartridges, making 50 negatives 24x24 mm. on a single loading. The standard lens is a Sonnar f/2, four cm., and others are available. All lenses couple with a built-in rangefinder combined with viewfinder in one large opening, and focus with a lever under the lens mount. It has a built-in self-timer and Compur-Rapid shutter with a top speed of 1/400 second, with the shutter release on top.

A short-throw lever under the second finger of the right hand advances the film and cocks the shutter with a single movement. Negatives are 1x1 inch. The focal length is 4 cm., so the image size as compared to a 5 cm. lens on a negative size of 24x36 mm. is substantially the same proportion.

ZEISS MOVIKON 8

The Movikon 8, finished in chromium plate and grey leather, uses either single-8 or double-8 film in standard 24-foot rolls, runs at 8, 16, or 64 frames per second, carries about 11 feet of film on a winding. Interchangeable lenses are in bayonet mounts with the Sonnar f/2, one cm., as standard. Because of its tremendous depth of focus the 1 cm. lens is in a fixed mount. The Tessar f/2, two cm. may be focused by scale from 18 inches to infinity.

The built-in viewfinder contains indicators showing how many feet of film the motor will pass before running down and whether or not there is still film in the gate, and also may be used as an angle finder.

Additional controls permit single exposures for animations, self-timer, and a cable release. There is a conventional dial showing the film footage and a second spring-tension indicator on the outside of the camera.

POLARIZING VIEWER

Zeiss also announces the Bernotar Orienter for the Contax, which enables you to observe the polarizing effect through a coupled viewer as the Bernotar is rotated before the lens. The Orienter attaches to the outside bayonet mount of the Contax and is controlled by a convenient knurled wheel synchronously operating the viewing and taking polarizers. With it the photographer knows that precisely what he sees is what he takes.

Craig Movie Aids

NEW low prices on the Craig Junior 8-16 mm. Splicer and the Craig Junior 8-16mm. Combination Splicer and Rewind Board have been announced by the Craig Movie Supply Co., Inc., of Los Angeles and San Francisco, manufacturers of CRAIG Movie-Aids.

Effective with November 1st, the price of the Craig Junior 8-16mm. Splicer will be dropped from \$3.75 to \$2.50. The price of the Craig Junior 8-16mm. Combination Splicer and Rewind Board will be lowered from \$8.50 to \$7.25.

A new folder on all the Craig Splicers and Rewinds is now available on request.

Film Reversal Simplified

FOR simplified development of Dufaycolor film and the reversal of black and white film, Sixteen Millimeter Sound Films, Inc., 78 Broadway, Boston, Mass., now offer Si-Mi X-Y Reversal Compound.

It is recommended for use with the Dufaycolor Developing Kit and permits complete development of a roll of Dufaycolor film in 15 minutes without removing the film from the tank for light flashing and re-development; these two steps are completely eliminated by using this new compound.

It is equally effective on cut film and if the amateur does not possess a tank, it may be used with trays. A special bulletin, X Y R C, giving complete instructions, may be obtained from your dealer.

Two-toned Cine Film

A NEW 16 mm. cine film to fill the breach between black and white and color film, is called COLORTONE, a two-tone Safety Film. Not to be confused with full color photography, the natural colors of the scene or object photographed are not registered in the new film. Colortone does, however, create a *semblance*, in two colors, of the color in your pictures. For example, for photographing a long scenic view incorporating sunset and green foliage, it is possible to emphasize the green foliage foreground against the pale colors of the sun and sky. The color is added in processing.

There are numerous color combinations possible, such as Bluetone White, Bluetone Pink, Bluetone Yellow, Bluetone Orange. The color combination desired is specified when sending in the film for processing. The price is \$3.50 for 100 feet, and includes processing; from the Owl Film Laboratories, Inc., 20 West 22nd Street, New York City.

Cine Film Protection

AN interesting experiment made by the S. Howe Williams Company of Richmond, Va., was brought to light in a letter to the Vaporate Company, 130 W. 46th Street, New York City.

It told how they had spliced a vaporated film with three lengths of untreated film on a 1600 foot reel. All four lengths were the same size and new at the time of splicing. After being in constant service for over two years, Mr. Williams says of them:

"The first three subjects had about reached their limit of usefulness while the Vaporated subject shows hardly any sign of wear and is still in a pliable condition."

Vaporate is designed to protect film against climate, wear, finger marks, oil, dirt and moisture. The Vaporate Company reports that over three quarters of a billion feet of film are treated yearly in the many plants in the United States, England, France and Italy, where the service is available.

Flood Light Reflectors

WHOLESALE RADIO SERVICE CO., INC., 100 Sixth Avenue, New York City announce the introduction of a new group of LAFAYETTE Fotolite Reflectors. Included are 10 and 12-inch general purpose reflectors and a 5-inch "spot" reflector. Rubber covered spring grips with ball-and-socket joints permit them to be attached anywhere. The push-switch lamp sockets are of standard size to accommodate No. 1 and No. 2 Photoflood lamps, and are equipped with 6-foot cord and plug.

Also introduced by Wholesale Radio Service is a new adjustable enlarging easel of all-metal construction. It permits enlargements up to 11 by 14 inches. Extra wide margin slides hold the paper perfectly flat and are maintained in accurate alignment by a secure locking device. A large white area serves as the focusing surface, and ruler scales are imprinted along two dimensions.

Eye-level Viewfinder

AN OPTICAL, eye-level viewfinder for box and folding cameras taking pictures $3\frac{1}{2}'' \times 2\frac{1}{4}''$ now is available. Beautifully chromium plated, and fitted with carefully adjusted lenses, it is supplied complete with two screws for fitting on to cameras for \$1.25. For further information, write G. Gennert, Inc., 20 West 22nd Street, New York City.

HERE'S THE ALBUM you've been looking for!



Now you can have the radically different new LENZ Salon-Type Album that leading amateurs demanded. Here are the features. **LAYS FLAT WHEN OPEN—DOUBLE STIFF BLACK OR WHITE PAGES** in matte finish—**CANT BULGE, even when filled—CORRECT SIZE (9x12 inches) WASHABLE BLUE LEATHER COVERS—PLASTIC BINDING—ATTRACTIVE COVER PHOTOGRAPH. DON'T DELAY!!** Send your order today for your new LENZ Salon-Type, plastic-bound modern album—the greatest advance in album design in fifty years.

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[102]

New Argus Accessories

ARGUS has recently added to its list of 35 low-priced accessories a Macro Attachment, a Copy Lens and a Portrait Attachment for use with Model "C" Speed Camera.

The attachment for Macro-Photography, selling for only \$8.75, opens up to ARGUS Model "C" owners the whole new interesting field of close-up photography. It makes it easy to take excellent detailed photographs of small objects such as flowers, plants, seeds, insects, jewelry, watch-movements, small machine parts, miniature art objects, etc. This attachment also makes possible pictures of bullets, finger-prints, hand-writing and type-writing specimens, useful in police and detective work.

The object to be photographed is placed on a stage provided in the kit. When mounted on the legs of the tripod, the stage is automatically in exact focus with the lens set at infinity. By following directions in the instruction book the whole process becomes instantly simple for every type of circumstance.

In the photographing of vertical objects such as growing plants, flowers, parts of the human anatomy, for example, where the object cannot be laid on the stage, the instructions call for holding the camera in the hand. The extended legs then fix the length of the focus, and the ends of the legs frame the picture-area.

The Macro-Attachment together with the new C-77 ARGUS Portrait Attachment and the C-78 ARGUS Copy Lens give the new ARGUS Model "C" a vastly widened range. Its interchangeable lens feature now becomes more than ever valuable in assuring Model "C" owners many new satisfactions, interests and uses for this versatile, low-cost, high precision speed camera.

The new Portrait Attachment, when used with the Model "C" camera's Cinar lens, focuses from 40" down to 20 1/2" and covers an area from 18 1/4"x28 3/4" down to 8 3/4"x13 3/4".

The new Copy Lens, when used with the Model "C" camera's Cinar lens, focuses from 22 1/2" down to 14 1/2" and covers an area from 10"x15" down to 6"x9 1/4".

Designed particularly for professionals and advanced amateurs, the Model "C" camera, itself, has many of the coveted features formerly available only in the foreign cameras and others selling at several times its price.

Harry Champlin Talks on New Formula

MR. HARRY CHAMPLIN, long famous as the photographic chemist and writer who formulated Champlin No. 15, gave his first lecture on Champlin Number 16 to the student body of the New York Institute of Photography.

Pointing out the superiority of his No. 16 over his previous formulas, Mr. Champlin emphasized that he had no intention of maintaining secrecy in regard to his discoveries. "Developers are tools of photography," he said, "and should belong to the photographic public. There is no royal road to good photographs other than study and work. My No. 16 won't make you a good photographer, but it will supply a fine tool."

Jacobson Synchronizer

THE JACOBSON Synchronizer permits synchronization from 1/50th to 1/1000th of a second for the Leica, and from 1/50th to 1/1250th of a second for the Contax. Once it is installed in the Speed Graphic, it is always "in sync". The Jacobson Synchronizer sells for \$25. Illustrated folders may be obtained by writing to the Irving Mfg. Co., 1537 No. Hoover Street, Hollywood, Calif.



FOTOFOLIO

MINIATURE NEGATIVE AND ENLARGEMENT FILE

Miniature camera fans have been asking for a way to keep negatives and enlargements. The new Fotofolio, made in book form, will accommodate enlargements up to six inches wide. Envelopes with scratch-proof and dust-proof fillers to accommodate 35MM. negatives are located inside back cover of Fotofolio. Gummed cloth hinges are attached to the leaves ready for mounting prints in step formation, 28 to the page. See these at your dealer's or send for illustrated booklet No. 12.

FOTOFOLIO

E. E. MILES CO., SO. LANCASTER, MASS.

SPECIAL! 35 M.M.

Eastman, DuPont and Agfa Film

25 ft. \$0.89 100 ft. \$2.75

Reloaded cartridge SPECIAL 40s

All fresh stock Guaranteed

F. O. E. Hollywood C. O. D.

HOLLYWOOD 35 MM FILM CO.

Box 2550, Hollywood, Calif.

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double extension bellows. New. \$32.00
Precisa 6x6 or 14x18 1/2 on 120. F4.5 Rodenstock
1/150 Promator II shutter. New. \$18.00
Fath Derby, used, F3.5 1/250
f.p. shutter. \$17.00
Argus C F3.5. New. \$20.00
V.P. or 1/2 V.P. Bellows. F3.5 Compur.
1/300 Compur. \$23.00

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A COMPLETE FULL SIZE TRIPOD

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ROLL-O-POD is neat,
round and smooth. Yet
it is a real tripod, 40"
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built-in swivel tilt top.
Made for lasting service.
Only \$5.25—mailed
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Contax Model I, F2 Summar.....	94.50
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Kodak Retina I chrome F3.5.....	36.50
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Pilot twin lens reflex F2 Zeiss Biotar.....	69.50
Rolleiford model I, F4.5.....	34.50
Rolleiflex Automat F3.5 Tessar.....	96.50
Korelle Reflex F3.5 lens.....	46.50

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THE IDEAL GIFT!

Perfect enlargements are easily made with Min Larger. Here's why:

Vibration proof enlarger assembly; extreme capacity on work table (up to 12" x 18" using regular 24" weight; 20" x 30", using 48" weight; from 24x36 mm negative); 3" first quality double condensers, giving intense, even illumination for any size prints; high-low light control, to suit thin or dense negatives; on and off foot switch, leaving both hands free for "doodling"; quick accurate focusing; metal carrier, for cut or uncut film; red filter and extra sturdy construction. Min will enlarge up to 1 1/2" x 1 1/2" (4 x 4 cm) negatives to any size you can handle.

MIN IS A SUPER VALUE made possible only by quantity production and selling direct to the user. Min is also furnished without lens, \$17.50; with bayonet mount fitted for CONTAX lenses, \$22.50; with mount to take FOTH DERBY lenses, \$18.50; with range for LEICA lenses, \$20.00; 20" x 24" baseboard, \$1.25; 48" weight, in place of regular 24" \$1.50; equal both. 50 cents. ALL PRICES ARE POSTPAID, subject to return within 10 days. TRY MIN UNDER OUR MONEY BACK GUARANTEE. Please state carrier desired—if for 24x36 mm (1" x 1 1/2") or half vest pocket negatives.

Min is also furnished for up to 2 1/4" x 2 1/4" negatives; with 3" f4.5 Velostigmat..... \$32.50
For National Graflex lenses..... \$32.50
With range for Korolle lenses..... \$22.50
2 1/4" x 2 1/4" with 2 1/4" f4.5 Velostigmat..... \$37.50
3 1/4" x 2 1/4" with 5" f4.5 Velostigmat..... \$52.50

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Min will gladden the heart of any camera bug. Min comes ready to attach to the work table, complete with 2" focus f3.5 Wollensak Velostigmat with iris diaphragm.

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With range for NEW f3.5 ARGUS LENS

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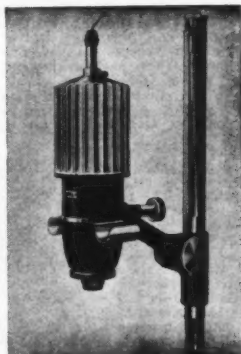
New Enlarger-Projector

THE OPTILITE Photo Enlarger, a new machine of the highest quality, combines scientifically controlled enlarging facilities with a tilting arrangement which makes the unit readily adaptable for projecting purposes.

The Optilite Enlarger has a special scratch and dust proof film holder, a scientifically designed cooling system and separate precision focusing adjustments for lens and projection bulb. Films are given bright, equal illumination by means of a low voltage bulb and double condensers.

The Optilite will be available in Junior and Standard DeLuxe models, both taking negative sizes from 35 mm. to 2 1/4 x 2 1/4".

Complete information and prices may be obtained from Intercontinental Marketing Corporation, 8 West 40th Street, New York City.



Agitation in Film Developing

THE TURBO-TURBULATOR is a water-powered device scientifically designed for agitating developing solutions during development.

The effect of agitation on the time of development required to reach a given contrast (gamma) is much greater than commonly supposed. When film is not agitated during development, the by-products produced as a result of the reaction remain close to the place of formation and retard development. Agitation removes these restraining substances from the immediate vicinity of the film, increasing the rate of development.

The Turbo-Turbulator eliminates uneven development, streaks, pin holes, etc. and materially assists in producing crisp and sparkling negatives. Operates from any water faucet. Little water is consumed. Development time is decreased 20 to 40%. Agitation is controlled simply by adjusting faucet handle. Soft rubber top prevents developing tank from slipping.

Turbo-Turbulator complete with flexible rubber hose, ready for \$6.50, from Canady Sound Appliance Company, 19570 South Sagamore Road, Cleveland, O.

Build It Yourself Kits

TO GET the most from your dark-room work, you should understand the insides of the machines. There is no better way to gain an understanding of your equipment than by actually putting it together yourself.

That is one of the reasons why ECONO-CAM CO., 260 Troy Ave., Brooklyn, N. Y. is putting out a line of Dark-Room equipment (contact printer, print dryer, print press, enlarging paper magazine—with more coming) in a "build-it-yourself" kit form, under the trade name of CAM-CRAFT KITS.

The manufacturer says that each kit is complete in every respect—with all parts cut and shaped. With only a screw-driver, you can put the article together in an average time of one-half hour. In that way, you can gain a clear knowledge of the "inner" make-up and the workings of your equipment and get better darkroom results.

Color Prints for Xmas

NATURAL COLOR Enlargement prints from Kodachrome and Dufaycolor make thoughtful gifts. The Hessercolor Corp., of Hollywood, suggests that there is still time to have this work done before Christmas.

Their prices are: 3x7 prints, \$10; 8x10 prints, \$15; 11x14 prints, \$20. Further information may be obtained by writing to the Hessercolor Corp., 6605 Hollywood Blvd., Hollywood, California.

Color Photography Lectures

LECTURES on color photography to camera clubs are now being scheduled by the International Research Laboratories at 228 Seventh Avenue, New York City, makers of the Lerochrome Color Camera. Mr. Adrian LeRoy, inventor of the Lerochrome Camera and authority on color work makes no charge for these lectures. Club secretaries can make arrangements by getting in touch with International Research Laboratories.

Movie Illustrates Titling

A 750-FOOT REEL called "Entitled to Success" showing various forms of amateur titles has been produced by Besbee Products Corporation, Trenton, New Jersey, makers of Spell-O-Tex title letters and animated cartoon sets. This entertaining and educational film is being shown to preview audiences at several movie club meetings in the East.

Produced under the direction of Mr. C. J. Carbonaro, A. C. L., the picture will be shown throughout the country during the next few months. Movie clubs which have not booked this film for local presentation should write to Bill Besbee, Trenton, New Jersey, immediately.

The film is available without charge and without obligation. In communities where no local movie club exists, arrangements can be made for the local Photographic Dealer to sponsor the showing.

Free Folder

ALL THE VICTOR lighting units designed for amateurs, from the low-priced but efficient clamp-on lights to the big berthas designed for No. 4 (3,000 watt) Photoflood lamps for color shots and advanced portraiture, are described in a new folder especially printed for amateurs.

"If you regard light as important in your picture making," this check-full pamphlet says, "you will give first consideration to lighting equipment which will make your indoor photography successful right from the start."

Request the Victor folder by writing, and mentioning MINICAM, to James H. Smith & Sons Corp., Griffith, Indiana.

Enlargers Protect Film From Heat

A PHOTOGRAPHIC enlarger should project actinic light of high intensity through the negative to provide for a reasonably short exposure and at the same time it should divert the useless heat rays and keep them from the film.

SIMMON OMEGA enlargers are designed to do this. With lamps designed to generate light rather than heat, the original heat is lessened. This lamp is then mounted in the exclusive dyna-thermal lamphouse designed to take the heat away from the film gate.

The Simmon Omega enlarger is available in three sizes, 35 mm., 6x6 cm. and 4x5 inches maximum. All sizes may be used for smaller negatives. The 35 mm. size is ideal for working from 16 mm. motion picture originals.

Retouch Prints with Eraser

THE Weldon Roberts Eraser, an excellent aid in retouching photographs, is used for removing shadows and blemishes. The point of the eraser can be sharpened with an ordinary pencil sharpener when extra fine work is needed.

Distributed by A. I. Friedman Co., of 43 West 47th Street, New York City. The complete set retails for 35 cents.

Mounting and Titling Prints

PHOTOMARKS, a new print mounting and titling method, eliminates the old fashioned 4-corner method. The Photomark consists of a piece of specially folded gummed tape with a sliding tab attached for notes or titles. It is not visible except for a small ring which, when pulled down, brings the title into view. The Photomark does not cover or mar any part of the picture.

Although the Photomark fastens the picture securely to the album, the picture can easily be removed at any time without damaging it.

A fabric bound, 24 sheet album, size 9x12", and a package of 50 Photomarks are offered at a special introductory price by Stutz Photo Service, Dept. M12, 10858 Shoemaker Avenue, Detroit, Michigan.

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DEVEL
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TRAY
NON-BREAKABLE

75¢

Economical to use. Needs only 4 oz. of solution. . . . Ideal for processing Dufaycolor. Handles any roll film up to 3 1/4 inches wide. Acid resistant, scratch proof roller holds film down. The Devel-O-Tray solves your film processing problems. . . . An Ideal Companion for

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CONTAX or LEICA

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From 1/500 to 1/12500 of a second

PERFECT SYNCHRONIZATION for the SPEED GRAPHIC
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**NOW! SHOW
YOUR COLOR SLIDES
WITHOUT PROJECTION, SCREEN,
OR DARKENED ROOM....**

Enjoy bright, sharp, enlarged views of your miniature film slides, black and white or color, without the fuss or bother of projection. Use the new Bausch & Lomb Film Slide Viewer, in handsome bakelite, black, brown or green—2-inch ground glass screen, 3-inch precision lens, 15 w. bulb. Ideal gift for mini fan. At your dealer's, or write for free folder. **\$8.50**

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NEGATIVE
PROCESSING**

**FOTO
FOAM**

FOTO-FOAM is the latest innovation of Anton Bruhl, used by him successfully in all his own photography. It has now been carefully prepared for you, with every thought given for finer results in negative processing.

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16 WARREN ST. NEW YORK

Wanderlust—a la Table Top

By COURSIN BLACK

WE CAN'T all buy tickets for Shanghai, Singapore, the Holy Land or wherever fancy leads us, but it is easy to recreate and visit these wanderlust places.



THE THREE WISE MEN

• A table-top miniature set. One flood bulb, at 3 feet, f8, 1/25th second, S. S. Pan, Perflex camera.

The "props" are simple and easy to find: cellophane, tissue paper, wrapping paper, excelsior, etc. For a lake, use a piece of glass, and cotton for clouds.

The lighting problem is easy. If flood bulbs are used, snapshots may be made at 1/25th or 1/50th of a second with the camera in the hand. A more careful arrangement of the composition can be made if the camera is on a tripod or other firm support. Then a smaller stop can be used. With Pan film and one flood bulb at three feet and one at five feet from the subject, an average exposure would be 1 second at f22.

Ordinary tungsten lamps also may be used. Two ordinary 50 or 60 watt lamps substituted in the above reflectors would call for an exposure of 2 seconds at f8. Even pocket flashlights may be used and they make excellent spotlights for small scenes. Two pocket searchlights about a foot from the subject will furnish enough light for a table top exposure at about 2 seconds, f8.

The camera naturally will be on a firm support for these exposures. The best camera to use for table tops is the reflex type, either single or double lens. A portrait attachment may be used or an ordinary dime store spherical spectacle lens.

The idea is to create, on the top of a table, miniature stories. It isn't child's play, even though you may borrow the baby's toys! There

is no limit to which the imagination may not carry us. We bring to life the fairy tales we used to love. We sprinkle about some grass or excelsior, create a pool of sparkling water with cellophane, a rustic bridge, a tissue-paper sun, a figure with a pack on its back suspended from a stick, and lo! we already sense the thrill of the open road, the feel of the wind and the scent of new-mown hay!

Or, with tiny cows and sheep, more excelsior and grass, and little trees, we go right back to the old farm. There we sail our boat or create a playground. Castles, dungeons, old English villages, speeding trains, and a thousand-and-one other tales and fancies await the touch of the magic wand.

You are a movie director staging a scene; an author, turning wisps of thought into tangible reality. At first the sets and figures may look artificial, crude. You carefully learn what your camera will do, make certain it is placed properly, is in sharp focus, and experiment with the photoflood to get proper illumination. But most important of all is using your imagination to devise actual story-telling sets, not simply figures and landscapes that are meaningless. It opens a new world of adventure, and in the creation of vivid picture-sets you develop a lively sense of artistry, idea-stimulation, and scope for that innate dramatic sense you've always suspected you possessed! It isn't easy, I repeat, and to get good pictures will challenge all your aptitude and skill.

New Home Movie Released

PATHEGRAMS, Inc., 30 Rockefeller Plaza, New York, has just released a new home movie film called "Dynamic New York." This is one of the most successful films produced by Pathegrams. It shows highlights in and around New York, taking in every important point of interest as Broadway, Chinatown, Wall Street, the World's Fair Grounds, etc. 360 feet, silent version, \$12; sound, \$25.



• John is just horrid. He won't open his presents with the rest of us!



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Book Reviews

IDEA AND FORM, Edited by Edgar M. Firth, F. R. P. S., 137 pages, 60 full page illustrations. G. T. Cheshire & Sons, Ltd., Kidderminster, England.

With this volume is offered the first number of a new Annual. However, it is not just a book of fine pictures, but an attempt to stimulate the imagination.

It points out the necessity of the *idea* behind every successful photograph and the need for *form* or appropriate subject matter. To further emphasize "Idea and Form", each illustration is accompanied by a brief discussion analyzing the source of its effectiveness.

COLOR PHOTOGRAPHY FOR THE AMATEUR, by Keith Henney, 281 pages, illustrations, 8 in full color. McGraw-Hill Book Co., Inc., New York City. Price \$3.50.

This practical book tells how to make transparencies in color with Kodachrome, Dufay-color, Finlay and Agfa color materials; how to make prints on paper by the Chromatone, Carbro, Wash-Off Relief and Colorstill processes; how to make separation negatives; and how to make prints from Kodachrome and Dufay-color. The apparatus necessary for each process is described, giving brand names; estimates are made of costs; hints and details of operation are given from other color workers, both amateur and professional, and from manufacturers.

With the help of this book the amateur can easily learn to take and print color photographs. Professional photographers and those interested in motion picture and advertising work will also find this book practical and helpful.

PHOTOGRAPHY: A SHORT CRITICAL HISTORY, by Beaumont Newhall, second edition, 220 pages, 95 illustrations. The Museum of Modern Art. Price \$3.

The purpose of this book is to construct a foundation by which the significance of photography as an esthetic medium can be most fully grasped. The approach is historical, with special attention to the interdependence of photographic technique and esthetics as evolved against the background of social and economic forces. Originally nothing more than a mechanical and inadequate method of picture-making, photography has developed into a complex and subtle medium. The scientific aspects are discussed only so far as they vitally affect the esthetic ends of the medium.

Photographic processes are analyzed, from those first introduced to those even now in the experimental stage. Also included is material

on news photography, color photography, scientific photography and the motion picture.

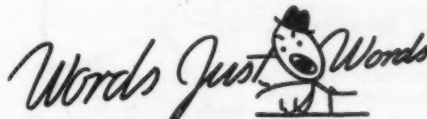
A comprehensive biographical index is included, containing material on all the major figures in the history of photography and on the photographers whose work is reproduced.

PHOTOGRAPHY AND THE AMERICAN SCENE, by Robert Taft, 546 pages, over 300 photographic illustrations. *The Mac-Millan Company*. Price \$10.

This is a history of photography, not from the technical viewpoint, but as social history. It traces the development of photography, the work of its leaders, and its effect on American social, artistic, literary and political life. The first half-century of photography, 1839 to 1889, is covered, and such subjects as the following are treated: the tintype, family album, stereoscope, recording of the Civil War and of the western American frontier, and early attempts to arrest and produce motion by photography.

Brief descriptions of the technical processes are included. The illustrations, besides being samples of the various types of photographs which were favorites in their day, also reveal intimate glimpses of the American scene.

The author, a professor of chemistry at the University of Kansas, has included 63 pages of notes, containing several thousand citations to sources hitherto overlooked or unknown.



Photographer's Lexicon

bromide—a stale joke
bromide paper—script used by radio comedians
candid—sugar coated
circle of confusion—international peace conference.
Contas—phrase used in starting an airplane motor
coupled range finder—a married cowpuncher
f-stop—phrase used by young maidens; e. g. "F you don't stop I'll scream."
film strip—movie sequence now banned by Hays office
ground glass—substance used by murderers to mix with victims' salad
hypo—used by drug addicts
Leica—South Sea dialect; e. g. "You Leica me, I Leica you."
salon—where beer is served
Scheiner—a black eye
splicer—justice of the peace or minister
superman—movie actor's face
transparency—desirable quality in feminine clothing
wash-off color process—method used by girls to remove makeup

Bass Bargaingram

Vol. 28. No. 12.

DECEMBER, 1936

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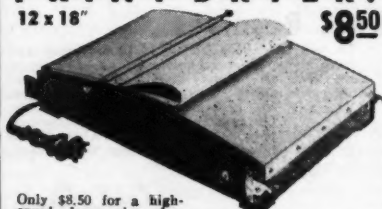
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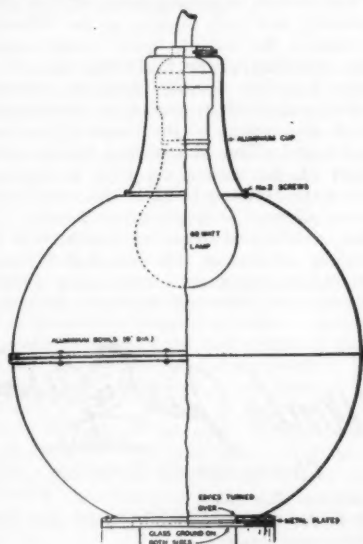
EMPIRE
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BUILD IT Yourself

Enlarger Lamp House

The lighting unit is the most important single part of any home-built enlarger. A neat job can be made with two aluminum pudding (mixing) bowls, an aluminum cup and an ordinary lamp socket.

The bowls are shaped like half spheres, slightly flattened at the bottoms, and when placed rim to rim, form a large ball. The cup



placed at one end will accommodate the socket, while a rectangular hole in the other end is fitted with a ground or opal glass to diffuse the light. The bowls may be put together with small screws or even wired together with fine wire.

Small holes may be punched near the top for ventilation. A sixty watt lamp gives economical illumination without heating up. The accompanying drawing gives the details for assembling a nine-inch lamphouse, which is at present used for a 2¼ x 3¼ enlarger and functions most satisfactorily.—K. Hlynka.

Cigar Box Negative File

For the busy photographer who shoots several dozen rolls a week and confines his work to but a few types of subjects a simple, inexpensive filing system is desirable.

The requirements for the file are simple:

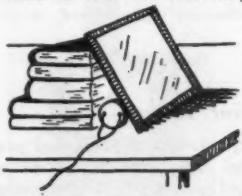
several cigar boxes of the 50-cigar size, a number of large-sized business envelopes, and some cardboard to serve as the index markers. The



envelopes are first sealed and then cut in half lengthwise, making two negative containers from each envelope. These containers will hold five-frame strips of 35 m.m. film. Index tabs are cut from the cardboard and are either lettered with the alphabet or according to subject. The particular file illustrated is used by the writer to keep portrait negatives, which are filed according to the name of the customer.—Ray Kershner.

Retouching Frame

A simple, adequate retouching frame can be made as follows: Take any small glass framed



picture, remove the print, leaving just the frame and glass. Paste white tissue paper on the front of the glass, set frame face down on some books or other support to get it at the right angle for working, slide a small electric lamp under the frame, and there you are!

Warming Solutions

An electric heating pad under a tray will keep the developing solution at the proper temperature on cold days. Most pads have a switch giving various degrees of heat. Unless the bag is waterproof, it is advisable to place several sheets of paper or oilcloth between the tray



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"THE LAST WORD"
see page 122

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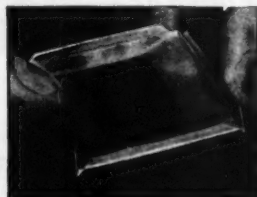
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- FREE LITERATURE
- MONEY BACK GUARANTEE

J-M-P MFG. CO. 3025 N. 34th St. Milwaukee, Wis.

CORRECTION

Excuse us please! In November MINICAM on page 98 our advertisement described PIC-SHARP instead of the famous SEE-SHARP. The illustrations used pictured the SEE-SHARP and the text of the advertisement told you all about the Pic-Sharp. Was our face red? We'll double check next time.

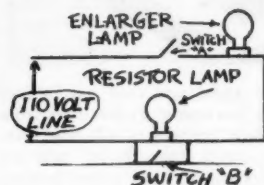
R. P. CARGILLE
118 Liberty Street, New York



and the bag to protect it from spilled liquids. For a constant check on temperature, a thermometer is kept in the tray.—*R. D. Kershner.*

Photoflood Dimmer

Photofloods are very efficient in speeding up exposure time when used in enlargers, but tend to overheat the lamp housing and negative. This may be overcome by connecting another photoflood in series with the enlarger lamp and arranging a switch to short out this series lamp whenever it is desired to operate the enlarger at full illumination.



The auxiliary photoflood should be outside the darkroom. Use a small photoflood in the enlarger, and a medium or large photoflood as the dimmer. Focusing may be accomplished with the auxiliary switch in the off position, thus causing the photoflood in the enlarger to burn at about half-normal illumination. Thin negatives may be enlarged with the switch in this position. It is to be noted that two switches are used, the usual one to turn the enlarger lamp off and on, and the second switch shunted across the auxiliary or "dimmer" photoflood, which acts as a resistor.

Raymond W. Hoepfel

Print Drier

A roll of flexible, corrugated cardboard provides an economical and efficient means of drying matt surfaced prints. With the prints spread out, the corrugated cardboard is rolled up and placed in a warm, dry atmosphere, preferably where there is circulation of air.

If desired, a strip of cheesecloth may be obtained the same size as the unrolled cardboard and the prints placed face down on the cheesecloth. A blotter roll, or strips of blotters may be used over the back of the prints.—*Ralph Schwerbel.*



CAMERA BOOKLET

A booklet listing all popular cameras with details of each, and name and address of distributor may be had from MINICAM, Cincinnati, Ohio, by sending 10 cents in stamps.

Non-Slip Tripod Tips

Most tripods are fitted with spiked tips which are very unsatisfactory on smooth floors. The

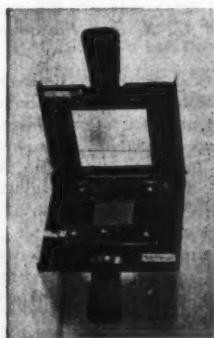


tapered rubber fittings called "Fuller Balls," sold at most plumbing counters, make ideal tripod tips. They come in several sizes. They may be used practically all the time, yet may be easily slipped off if the spikes are wanted. The sides may be shaved off to enable flat legs to telescope without pushing the tip off. On wood tripods, small rubber-headed tacks may

be put on the upper sections to take up wear and prevent slipping on low setups.—F. Dale Smith.

Glassless Negative Carrier

USERS of miniature enlargers with metal negative carriers employing glass pressure plates can banish film scratches and Newton Ring troubles, and greatly minimize disaster from dust on the film, by slightly altering the negative carrier as shown to eliminate the glasses.



Remove the two glass pressure plates. Then get a small piece of celluloid of approximately the same thickness as the glass. Such celluloid, used for draftsmen's and artists' "triangles," may be purchased cheaply at any artists' supply store.

Four narrow strips of this celluloid are then substituted for the glass pressure plates in the negative carrier, the strips being placed lengthwise of the film channel to grip the film only by its perforated edges. Small brass nails, with the heads countersunk to permit the strips to sandwich closely together when the negative carrier is closed, are used as rivets to hold the strips firmly in place. Or adhesive or Scotch tape may be used.

To shape the strips from the celluloid, score both sides with a knife and break. Smooth the edges with sandpaper or file, and round the corners so they will not catch on the sprocket holes of the film.—Warden La Roe.

A large booklet listing all makes of exposure meters, and enlargers, with details of each, and the name and address of the distributor may be had by sending 10 cents in stamps to MINICAM, Cincinnati, Ohio.



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??? QUESTIONS ??? to the Editor

Q. In enlarging, do the stops on a lens mount work the same as on the camera? For example, does f8 in enlarging require half the exposure time of f11?

Ans. The calibrations on a lens mount are accurate only when the distance from negative to lens is approximately equal to the focal length of the lens. This distance usually is greater than the lens' focal length in enlarging.

Q. I have heard that silver can be recovered from used fixing solutions. How is this done?

Ans. Commercial finishers and large processing plants like the Hollywood movie establishments recover thousands of dollars worth of silver from exhausted hypo baths. For amateur photographers and even studio operators, the quantity of film used is relatively small and it is not practical to attempt to save hypo or recover dissolved silver.

Q. Is it true that film rating speeds cannot be converted from one system, such as Scheiner, Weston, H. & D., into another? What is the difference between U. S. and European Scheiner ratings?

Ans. Yes, mathematical conversion between the systems is not possible because they have no common basis. For practical use, however, fairly accurate tables are available. One was printed in MINICAM for April, page 79. A Scheiner speed of 21°, for example, is given as equal to Weston 16; 24° equals Weston 32; 27° equals Weston 64; etc.

In the European system, films are rated two full stops higher than in the U. S. system. This means that a film rated U. S. Scheiner 21° would be rated European Scheiner 27°.

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how to make *Your* PICTURES TALK



"Talking Slides" are here. Make moving dramas with a minicam, snapshots that leap into life as they speak for themselves.

By HERBERT C. MCKAY, F. R. P. S.
Illustrated by the Author

PLEASURE, terror, fear—more impulses are received by the human eye than by all the other senses of smell, taste, touch and sound combined. That is why pictures are the most effective story-telling medium in the world.

The sense of sound is perhaps next in relative importance. At a sudden noise, new-born infants tremble in terror. The combination of the two—sight and sound—provide irresistible effects.

Cine amateurs know they can improve a film a hundred per cent simply by playing suitable records. Now it is suddenly being realized that still pictures, too, can be edited and knit into interesting story-telling narratives.

This is done by projecting the pictures, in predetermined order, on a screen. But it's more than a return to "magic lantern" days. Your own snapshots can be made into transparencies and projected either in black and white or in color. Slide projectors may be had as low in price as \$10.

Then only a one-dollar hand microphone to attach to the radio is needed for an introduction

to the satisfaction of seeing your own pictures speak.

A certain chap in photography makes his annual vacation trip a camera adventure. His pictures are examples of expert craftsmanship—but they are as good as lost.

A group of friends will visit—Mack Minifan, let's say his name is—and he drags out stuffy black albums and old boxes filled with loose prints. He starts to tell the story of a certain picture, other guests come and crane over each other's shoulder and just as the story begins, Mack, digging deep to find the next picture in the sequence, finds an unrelated one that disrupts the entire story. Through absence of continuity, the jumbled condition of the shots and the crowding of the guests, Mack is regarded as a sort of dub photographer who bores his friends.

Mack made about a hundred beautiful Kodachromes this summer and was bemoaning the fact that if he tried to show the tiny transparencies, his friends would be even more deeply bored. A projector was suggested, but

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THE SIMPLEST OUTFIT

Fig. 1

- With a microphone connected to a radio set, the operator describes his pictures as he projects a movie or a series of slides. Or a record of suitable music may be played.

Mack could not agree to going back to "an old-fashioned magic lantern". It took a personal demonstration to prove to Mack that the projector is the best means to show the full beauty of any photograph, in color or in black and white. Seeing his own slides projected converted Mack.

Because light must pass through the image on paper, strike the white paper beneath and be reflected to again pass through the image, an image on paper must be exceedingly thin and delicate. Rich shadows become lost and many of the tones in the original negative are lost. See Figs. 3 and 4.

Every amateur knows that an 11x14 inch enlargement from any negative is more impressive than a three-inch enlargement. But imagine the result when the image is projected to four by six feet!

Projection takes place in a dimly lighted (but not a completely dark) room. The very brilliance of the screen keeps eyes and attention fastened upon it. It takes only one or two trials with the projector to prove that this is the only successful way to present a series of pictures to a group of people. It means discarding boxes of prints, stuffy albums and loose paper prints.

Mack, our hero, invited a group of guests and tried out projection with decided success. There was one trouble, however. He had to keep up a running commentary as the slides were shown, and more than once the story was interrupted to go back to a previous slide which was

important to Mack, but ruinous to the continuity of the picture narrative. The use of strip positives would help, but the problem was really solved by one member of the group who was a cine amateur. His suggestion was that the series be treated just as though it were a movie film.

Many amateur movie films are successions of scenic shots in which there is little if any motion, and here was the very same effect obtained from still slides. Even the slides which contained living subjects carried such a suggestion of life that a preliminary projection of a set of them without comment bore a striking resemblance to a motion picture.

So far so good. The next step was the scenario. Because Mack had already made the slides, he had to adapt a scenario to them, but in the future he will shoot his pictures guided by a prepared skeleton scenario. After the scenario, all of the slides are arranged in order to follow the story. This establishes the continuity.

The next step is the editing. Each slide is examined carefully for physical and photographic defects. All defective ones are discarded. Then each of the remaining slides is examined with regard to its place in the story. This necessitates some rearrangement, but when it is done and the slides projected in sequence, it is surprising to find a story presented so unmistakably that the continuity can be followed without remarks and even without titles.

This beginning certainly increased Mack's enthusiasm, and he set to work in earnest. He had a good radio set and he wanted to use it for sound effects. He went to his radio serviceman and returned with a home microphone and plug-in phonograph adaptor. The latter is a bakelite shell placed between the first amplifier

- A special plug may be obtained to plug in the microphone between the first amplifier tube and its socket. This converts any radio set into a miniature public address system.

Fig. 2



tube and its socket. Mack had spent two dollars and thirty cents.

He plugged in his "mike" and snapped on the radio set. Because Mack wanted to observe the effect himself, he gave the script to his daughter and had her do the operating. The slides were arranged in order, each with a small numbered sticker. The radio was placed below the projection screen.

Mack's daughter started the projection and as she changed the slides, followed the script, reading into the microphone. The effect was definitely superior to direct speech. With the voice coming from the screen, all attention was concentrated there. There was no question regarding the satisfactory presentation, but Mack was not satisfied.

Again the movie amateur came to the rescue. His suggestion was to fill in the gaps with appropriate music. Mack was less enthusiastic, but the movie amateur volunteered to assist.

Again Mack went shopping. His purchases included a record player to attach to his phonograph at \$9.95 (magnetic pick-up type), a record rack to hold the records in sequence at \$2.50, a selection of a dozen bargain records at \$1.00 for the dozen, and a double pole, double throw switch (Fig. 7) at a quarter. Mack's funds were depleted by \$13.70.

The switch is used to throw either the record player or the microphone into the



● For permanent use, records of the voice, music and sound effects all may be combined and made into permanent records. An electric phonograph or a phonograph attachment for a radio may be used to make the records. (See Fig. 6.) Fig. 5

radio as shown in the diagram, Fig. 8. This makes it possible to reproduce a record or microphone speech through the radio and to make the change instantly. Later Mack's radio serviceman made a push-button switch on the handle of Mack's mike to facilitate switching between voice and music.

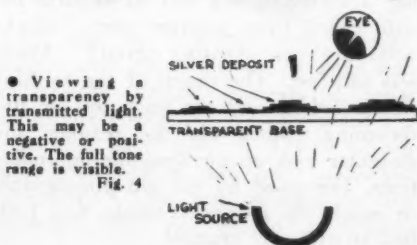
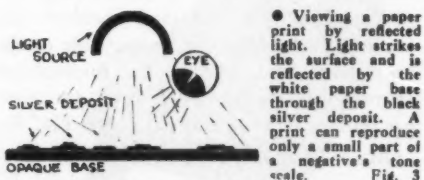
The next step was to suitably arrange the records and the slides. This really demanded two people for operation, one to change the records and the other to read the script. The effect was excellent, but to Mack it was too much like work.

If Mack could give one performance and make a permanent sound record of his voice and the musical accompaniment, he would have a complete home talking picture. All he would have to do would be to play his records as he projected the slides. He would have talking slides!

The same procedure may be employed for home movies, but in either case, the result is a complete, effective sound picture.

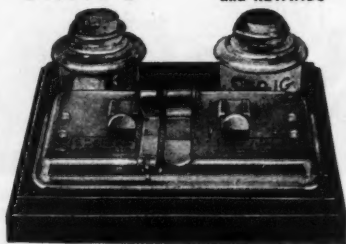
Professional machines, such as used by radio stations for making recordings, are quite costly. But a small, compact unit recently put on the market is the Presto Jr. Recorder which retails for about \$150. It is made by the Presto Recording Corp.

Mack thought he eventually would have one of these, but in the meantime he wanted to see what he could make himself. One of his friends had an electric phonograph and made records by



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simply talking, playing or singing into the loud speaker.

Mack decided to do the same with his radio record-playing attachment. He called in his radio serviceman, who said, "Sure," and proceeded to show how instead of putting sounds into the radio from the record disc, the sounds could be put into a record from the radio. Blank records are obtainable from phonograph dealers. Mack purchased a blank, "pregrooved," record.

The microphone was left in its original connection. Then the radio man placed a small metal ash tray on the phonograph pickup head (it weighed about four ounces) to give it added weight. The next step was to bring out a new, blank record and put it on the phonograph. When it was all set up Mack was asked to give his talk for a series of slides into the microphone.

The projection started and Mack talked away. At the same time the phonograph was started—but no sound came from the radio, none from the phonograph. Henry asked what was wrong and was told to go right ahead. He did so and finished the talk.

When he stopped, the phonograph connection was switched back as it was originally and the record started. There was Mack's voice talking from the radio! Mack was delighted and demanded to know all about it. By substituting the pickup head for the loud speaker (attaching the head to the output side of the amplifier), and feeding the microphone current into the amplifier input, the pickup unit acts as a recorder. (See Fig. 6).

Mack soon surprised everyone by making a record which was so faithful his wife called from another room, "Mack, what are you shouting about?" Mack was satisfied. The group of the faithful was called in and the stage set for the recording. Mack did the reading, his daughter took up the feminine interpolations, Jim stood by the old phonograph to supply the incidental music, and Jack had an orchestra triangle.

After the record was made, it was played back.

Mack used an opening title slide, "Pike's Peak." As the record started, "Colorado Sunset" came softly from the loud speaker and Mack's voice broke in with a repetition of the title. The next slide showed Mack and Mrs. Minifan entering a cab. From the loud speaker came street noises and the honk of a cab's horn. Mack announced something about starting on the trip. Next came a scene in Grand Central and for the first time one noticed a faint ringing chime just as Henry changed the slide. That triangle had barely recorded, it was so far away, but it did give Mack a signal to change slides so he would keep pace with the record. Again it sounded and the picture of the limited was on the screen. Sure enough, from the loud speaker came the thundering roll of an express locomotive with that peculiar hollow, moaning whistle of a rapidly moving engine. That sound made it almost impossible to remember the picture was a motionless image.

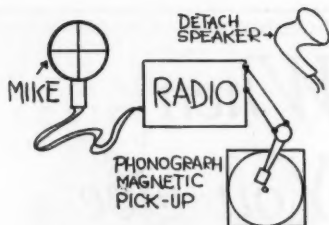
- The new Presto, Jr., a complete sound recording and record-playing machine, now sells for about \$150, bringing professional results within reach of all.



On and on went the series, Mack's crisp words describing the scenes, with appropriate sounds interpolated from sound effect records. We recognized the train shot as a copy of a well known photograph which had been published repeatedly. This was permissible for copyright does not extend to making

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- By the use of pre-grooved records, a microphone and the household radio set, records may be made which can be played back to furnish sound with the slide series. The phonograph pickup unit must be of the magnetic (not crystal) type. The microphone is plugged into the radio and the wires from the phonograph playing head are connected to the speaker or output terminals of the radio. Fig. 6

copies for private use, and often stock shots will round out a personal scenario which has had "holes" in its continuity.

This sequence started out with black and white, then followed some color toned slides and finally in the Colorado country, with its magnificent scenery, Kodachrome took over the screen. Those beautiful scenes were given full screen time and I remember snatches from "William Tell," "Peer Gynt," and other effective musical interludes.

The experiment was apparently successful, but Mack had to know. He invited a group of a dozen or so for the following evening. Most of them came, and most of them groaned when Mack started talking about his vacation pictures. The resignation was visible on most faces, but when Mack invited them into the living room and drew aside the drapes which covered the screen, curiosity overcame the guests; most of whom wanted to know when he started making movies.

Mack, chatting about nothing in particular, went to the table, switched the room lights to low and started his program. Startled gasps came from some of his guests when the sound started, but soon there was absolute quiet except for the record. There was no buzzing of whispers, no fidgeting, nothing but rapt attention. When the last slide faded from the screen and Mack turned on the regular lights there was not a sound for five or six seconds—and then ap-

plause, regular, honest-to-goodness applause.

One of the guests said later, "Mack, for the first time, I've really enjoyed amateur pictures, I have never seen a theatrical presentation which was as interesting—but HOW did you do it?"

Here's how, said Mack:

Step 1. Edit pictures by selecting the best ones, omitting the imperfect ones and putting in order to best tell the story.

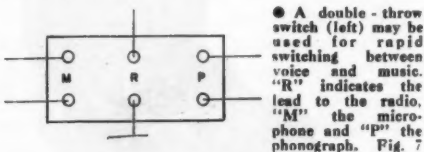
Equipment required: Slide projector. Pictures in transparency or slide form. Slides may be made from your snapshots or from any negatives by printing them on film, as described in this department last month.

Step 2. For background atmosphere, play phonograph records of suitable music or other sound effects while the slides are being shown.

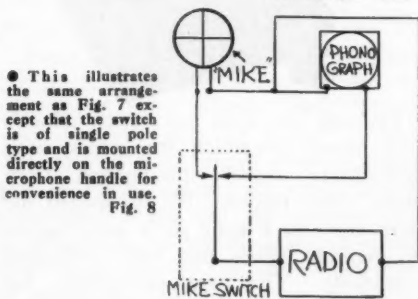
Equipment: any phonograph, electrical or mechanical.

Step 3. Give a running dialogue, describing the pictures, or better yet, narrating a story as the pictures flash one at a time on the screen.

Equipment: A hand microphone (priced from a dollar up) equipped with a long plug-in cord. A radio set. This is placed below the screen with the microphone cord leading from the radio to



- A double-throw switch (left) may be used for rapid switching between voice and music. "R" indicates the lead to the radio, "M" the microphone and "P" the phonograph. Fig. 7



the projector. The operator speaks into the mike, telling the story while the slides appear.

Step 4. Voice and music. This combines steps two and three.

No additional equipment required except a switch to permit shifting from voice to music or vice versa.

Step 5. Making a complete sound record on discs. This records all the descriptions, dialogues, music and sound effects into permanent form.



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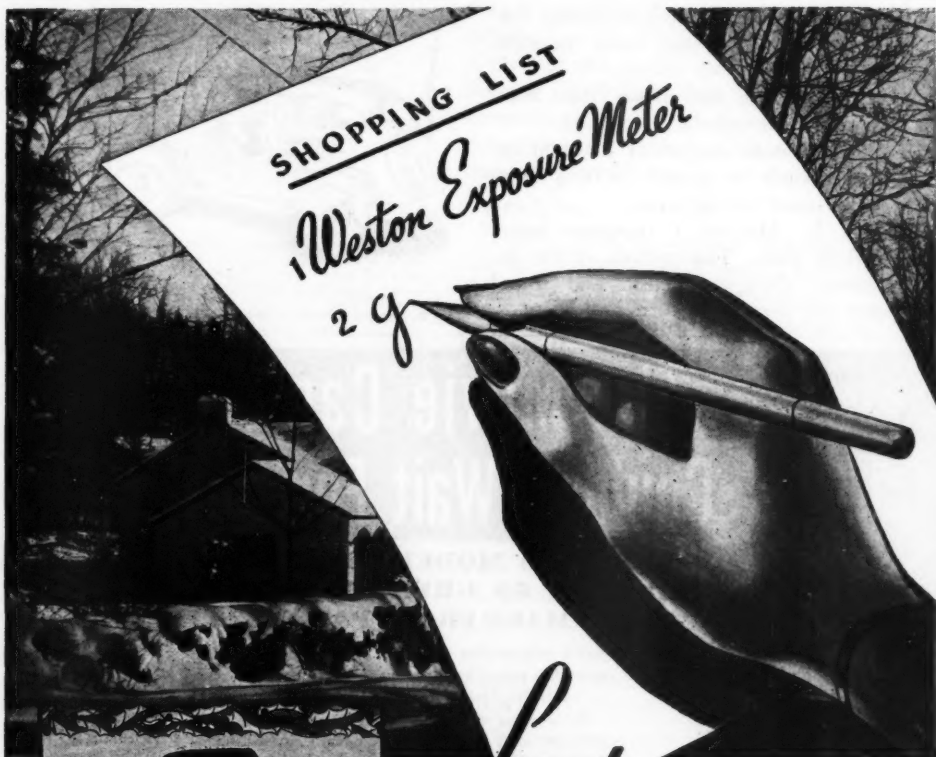
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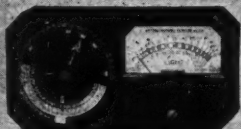
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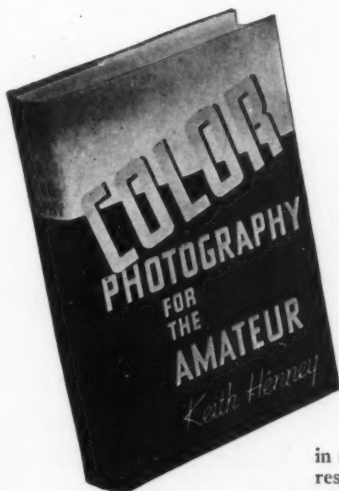


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